Gleanings in Bee Culture

Created to help beekeepers succeed

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Beekeeping in South Africa

By T. H. G. Farnden, Pietermaritzburg, Natal, So. Africa

A typical South African Apiary.

Beekeeping as such has only been practiced in this country since the coming of the white man some 300 years ago. The natives were far too improvident as a race to indulge in any form of apiculture, being content merely to locate and rob wild swarms in the bush.

Even the white man remained for a long time unaware of the possibilities of beekeeping as a means of livelihood, or of the value of bees for pollinating crops. It is only during comparatively recent years that serious attempts have been made to provide suitable hives, to build up apiaries, and put beekeeping on a commercial footing.

Today, as a result of timely aid from the Government and the formation of a number of local beekeeping societies, interest is growing rapidly and apiaries are springing up all over the Union. Each province has its annual agricultural show, to which apiarists from the

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A wild swarm in a loquat tree.

other provinces send exhibits, and competition is keen.

Although well-organized apiaries are, naturally, not excessive in number, most farms and small holdings in this country keep one or two hives and the majority of people living in rural areas appear to have a fundamental knowledge of the subject. Not all of these follow modern methods, however, and it is not at all unusual to come across small apiaries comprised of nothing better than a collection of boxes or small packing cases converted roughly to serve as hives. Local societies and beekeepers generally are, however, spreading knowledge by means of articles, shows and competitions, and doing much to alter this deplorable state of affairs.

One factor which is hampering the institution of better apiaries is the difficulty at present in obtaining hives and parts of hives, for both have been in exceptionally short supply during the past few years. This has compelled beekeepers who require a number of hives to make their own instead of purchasing the Langstroth type. Skeps, incidentally, are never seen in this country.

But whatever type of hive is in use, the South African apiary is usually in the open. Although the advantages of a house apiary are appreciated, it is considered that bees are sufficiently hardy to withstand the varying climatic conditions. Naturally each individual beekeeper has his own ideas as to what is best for his swarms, but it is generally felt that the shade of nearby trees is sufficient although some prefer their hives completely in the open. The woodwork of the hives is invariably painted, aluminum paint being at present popular because of its heat reflecting properties.

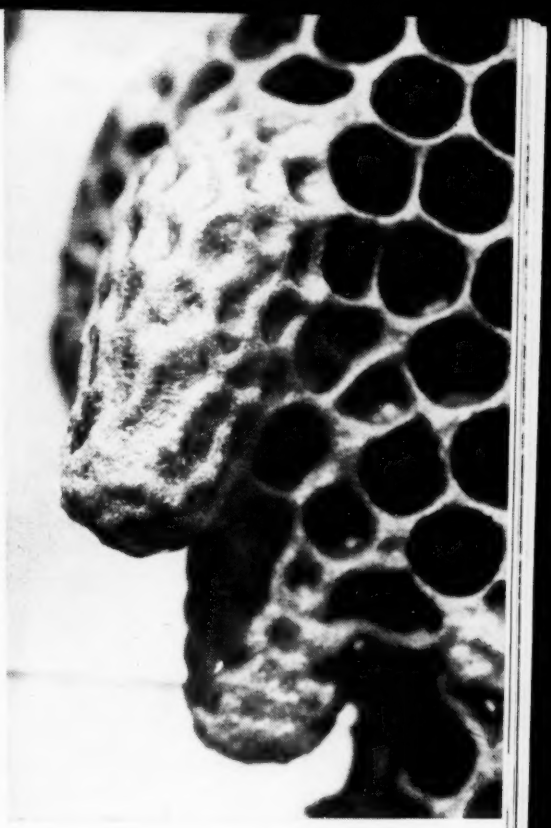
Swarming rarely occurs, and in a country where swarms can and do live in the open for the greater part of the year this is evidence of the adequacy of the modern hive. Nevertheless, it is usually possible to collect additional swarms if required, for at most times of the year there are free swarms about, and in addition there are usually swarms to be found in hollow trees, etc., and particularly between the walls of the wood and iron homesteads so popular in this country—a site to which bees are extremely partial.

A fairly common practice in this country is to keep a few hives at the home farm and to spread the

remainder among neighboring farms, visiting them periodically for inspection or the extraction of honey. In this case, the apiarist needs a light van or car in which to transport the honey extractor, spare parts, etc. One advantage of this system is that a large number of colonies can be maintained in areas where food supplies are not overabundant.

Migratory Beekeeping Practiced

In areas where widely varied crops are grown, complete apiaries are often moved two or three times during the year as the different crops come into bloom. By taking advantage of the saligna gums which flower from March to July, the hardwood gums from September to Christmas, citrus in the spring, and other fruits from January to March, a nine-months' honey flow can be more or less assured each year. A further advantage of this system is that different flavors can be guaranteed with given crops. Commercial beekeepers who move to definite localities with the seasons usually fit up some kind of honey house at each place so that only the extractor and spare hive parts need to be transported.



Supersedure queen cells enlarged about 2½ times. These are usually to be found on the edge and near the top of the comb.

The type of bee bred in South Africa is a hybrid which has evolved from mating the indigenous brown bush bee with Italian queens imported from America and European countries under Government control during the past 50 years. The best traits of both appear to have been retained, for the result is a hardy bee of good size with a great capacity for work. Though frequently more vicious than one would desire, this is often more than offset by the extreme neatness of the combs—a characteristic of the wild bush bee.

This process of hybridization seems to have reached the saturation point now, and it is generally considered that nothing is to be gained by importing further queens, as the existing strain requires little improvement. For this reason few queens are imported today except for experimental purposes, and most beekeepers are content for their hives to requeen by supersedure.

A certain amount of cross-breeding still does take place between wild bush bees and virgin hive queens, but this is, of course, inevitable. As a result, swarms vary considerably in viciousness and general color—in some areas they are very dark while in others almost golden in hue. One very favorable characteristic of the South African bee is that it is usually up and about very early even on cold days, whereas the imported stock often shows a reluctance to leave the hives until warmer conditions prevail.

The average size of South African swarms compares very favorably with those in most beekeeping countries, 50,000 to 75,000 bees being considered a good average. Where conditions are suitable, swarms are capable of being built up to an enormous size, but this is usually undesirable; particularly where hives have to be moved frequently from place to place it is more convenient to keep them within reasonable limits.

The amount of honey produced by a good swarm in one year varies considerably according to local con-

C. C. Hayter, Secretary of the Natal and Zululand Beekeepers' Association, inspecting colonies at the start of the honey flow.

ditions; whereas some parts of the Union are extremely fertile, others are so barren as to be almost worthless for beekeeping. Climatic conditions also vary considerably, as do the types of crops grown. The honey crop varies from a mere 20 pounds a year in the Karoo district of the Cape, to perhaps as much as 800 pounds in the most fertile areas, the average for the whole Union being something like 24.8 pounds per hive.

Some Prodigious Crops Produced

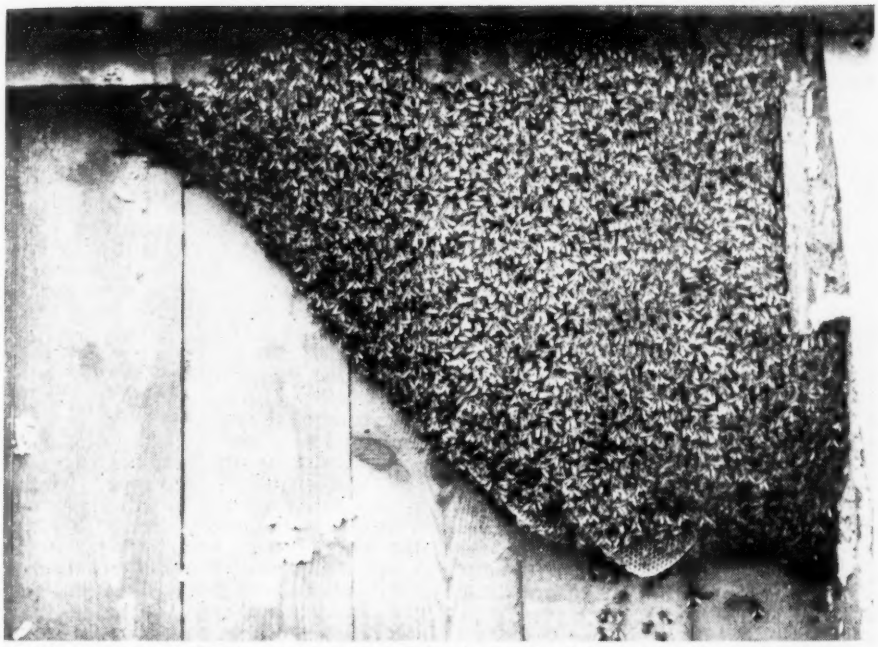
Nevertheless, from time to time prodigious crops are reported, the world record for 1948 and '49 being won by an apiarist living in Pretoria with a total of 839 pounds from a single hive, and 2113 pounds from a multiple hive with three queens. In one area a beekeeper with 500 hives reported a gain of 40 pounds of honey in a single day, though generally speaking the average bee farmer in normal areas is satisfied if he gets from 60 to 100 pounds per hive annually.

On the whole, the best honey-producing area is the Cape Province with its vast fruit orchards and wealth of wild flowers that bloom well into the autumn.

Many parts of the Transvaal and Free State are not far behind, for there, too, large areas are devoted to fruit growing of a specialized nature, in addition to field crops and general farming. Unfortunately, the winter is very severe in the northern districts and for long periods the hives are completely covered with snow which forces the bees to eat heavily into their reserves. Artificial feeding is often resorted to in those areas.

Conditions in Natal are quite different, for mixed farming is carried on and large areas are planted with timber trees, while the various fruits and crops grown in the other provinces are also in evidence. The winter is reasonably mild and brings with it a definite honey flow from trees which prefer a milder sunshine.

Zululand is really part of Natal, but here climatic conditions are again quite different. Its warm, humid climate, vast forests of gum



Wild swarm located between the inner and outer walls of a wood and iron farmhouse.

trees and large sugar-growing areas make it a veritable beekeepers' paradise, the envy of all who live in less favored areas.

The honeys produced are as varied as the types of crops grown throughout the Union. It is difficult to say from which crops the major portion of the honey output comes. The most important sources are gum, citrus, lucerne, deciduous fruits, weeds, and wild flowers. Wattle, though extensively grown, especially in Natal, is considered useless as a great deal of pollen is produced with very little nectar—whole apiaries have been known to desert areas in which this type of tree is grown exclusively.

No statistics are available showing which honey flavors are most popular, each district usually preferring the type produced locally. Particular flavors are not generally insisted upon provided the honey is pure.

Diseases among bees are practically unknown in this country, and this is probably largely responsible for the Government's decision to control all imports of queens from abroad. Foulbrood here is nonexistent.

One of the most troublesome pests is the wax moth, which is very prevalent in some areas and makes it difficult for unwary beekeepers to keep their swarms up to good strength.

Sugar ants are a further source of trouble in districts where conditions are suitable for their needs, and it is not unusual for whole swarms, complete with honey, comb, and brood, to be entirely destroyed in a single night. The small red ant is not considered as harmful as it justifies itself by keeping the hives clear of dead bees and torpedo flies, the latter being a parasite common in most areas.

Bee birds are another menace, and are so numerous in some districts as to make it virtually impossible to keep bees at all.

White ants, which eat away the wood of the hives, can also give trouble. Other pests such as pirate bees, mantes, bee lice, etc., seldom prove very troublesome if normal precautions are taken.

Although beekeeping in this country is not without its difficulties, conditions on the whole are very favorable and offer a bright future. As more and more join the ranks of modern beekeepers, South Africa will almost certainly take its place among the foremost honey-producing countries in the world.

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Beginning the Hard Way

By Roy L. Giebel, Scotia, N. Y.

Beekeeping descended upon me with the ease of honey flowing over a pile of freshly made hotcakes, but all was not milk and honey that first year.

It was in May last year that I picked up a copy of one of the leading monthly magazines and read a short article about a man in New York City who kept a colony of bees on the patio of his pent house. The bees, I read, were used to pollinate the various flowers, trees, and shrubs which he had planted there. Besides the pollination he got 100 to 150 pounds of honey. This fascinated me. We had just moved into a semi-rural district, and we had plenty of room on all four sides. My family all liked honey. I liked honey. There was no reason in the world why our family could not cash in on such a profitable enterprise.

The next day during my lunch hour I dropped into the only place that I knew of that might be able to give me any information at all on the subject of beekeeping, the Public Library. I was amazed at the number of books which had been written on the subject. I selected a couple which seemed to approach the subject from the simplest possible manner and spent hours going through them. The more I read the more enthusiastic I got. Everything I had read, however, pointed out very clearly that the preferable time to get started in beekeeping was early in the spring before the first fruit bloom. This meant about the first of May here in New York State, and here it was almost the third week in May. But the fires of enthusiasm were kindled. The study which I had made, slight as it was, had not dampened my spirits one bit. Even the detailed accounts of the damaging effects of the sting of the bee could not swerve me from my course.

In three days time I had contacted my local bee supply house and had ordered the basic equipment. I requested enough for one complete colony together with such things as a smoker, gloves, hive tool, and veil. My bees, they told me, would come up from Louisiana and would get to me in about a week. I was all set.

The Bees Arrive

For the next three days I hammered nails and strung frame wires. The instructions which came with the equipment seemed to assume that everyone had assembled hives before, and the net result was general confusion. But with perseverance all obstacles were surmounted and all was ready and waiting when the express office called and advised that the bees had made their scheduled appearance. We were soon feeding sugar syrup to a roaring bunch of discontented females confined to a narrow shipping cage.

By the time the sun began to set that afternoon, however, things were under control and the roar had subsided to a gentle hum. This was the big moment and, believe me, I must admit that I was more than a little bit apprehensive about releasing those bees. But after a little heckling on the part of the folks in the family and the kids next door, I picked up the package and went back to the hive. I uncorked it and out spilled the milling throng. I removed five frames from the brood chamber and placed the open package with the remaining bees in the space thus provided. The queen cage was placed with the exit up between two frames. The hive was closed. The entrance was reduced by placing a feeder full of syrup in the largest opening of the entrance block provided with the hive. I went back to the house and climbed into a cool shower.

Queen Not Released in Three Days

Three days later, in accord with all the best instructions, I reopened the hive and removed the empty package. But the queen had not been released by the workers. The books said she was supposed to be released by this time. What was one supposed to do now? The logical thing, of course, was to let things be, but I was an eager beaver. I took the queen cage, and in an effort to enlarge the small hole in the candy, I knocked all the candy out and the queen was out on top of the frames before I could say the word I had in mind. A group of workers surrounded her, but apparently things were going to be all right despite my well meaning blundering. I closed the hive, re-

plenished the feeder, and left things well enough alone for another week.

The next time I opened the hive everything was apparently still in good enough order. There were three frames of drawn comb. There was evidence of brood in one of these combs. I couldn't find the queen, but then, this was my first attempt at manipulation, so I charged it all off to inexperience. Things were certainly looking fine and it was with the greatest confidence that I closed the hive that morning. Visions of all the honey we would have in a few months whirled through my head for the next week. I could hardly wait for Saturday morning so that I could get another look at those busy little creatures who were working so hard to fill the Giebel larder.

Saturday, like all eventful days, finally got around to coming and out I went to take another look at my charges.

Many Queen Cells Found

As if to prove the validity of the old phrase, "There's many a slip 'twixt the cup and the lip", the frames were literally covered with queen cells. This was not according to any of the elementary books I had read. Surely they were not going to swarm. They couldn't. They were not supposed to. There were still eight frames of undrawn foundation, but didn't the books say that at the very least bees were unpredictable?

Well, if this was all correct, then perhaps the thing to do was to destroy all of the cells. Enough reasoning. I destroyed the cells. It was not until considerably later in the year that I finally understood about supersedure. Then it was that I began to tie certain facts together. Remember the difficulty in locating the queen! Remember that there never was any indication of a swarm having issued from the hive! These two things helped to analyze the trouble at a later day, but it did not do my colony any good back in the early days of June. By my own contrivances I had managed to shove the progress of my colony back at least two weeks, perhaps more. I say two weeks because after I found that the workers continued to build queen cells, I decided that something about which I knew nothing was going on and that I might learn something if I let them go ahead and develop their new queen. I did learn, but as I have already said, it took a considerable amount of time.

This was merely the first of a number of mistakes which I made this first year. Probably I made all that are in the book.

Another Mistake

When, in the middle of June, I found that there were still only three frames of drawn comb, I decided that perhaps the bees would do better if they were given more room. I had in mind the chapters I had read about two-story hives. I added a second story. I put two of the frames of drawn comb with brood into the upper story along with eight frames of foundation. The result? Probably complete demoralization of the colony. I certainly did not get any more frames of comb and the queen apparently was not too anxious to work in those already provided for her.

It was at about the same time I decided to open the hive entrance to its greatest width. This, despite what I know now was an extremely weak colony. I also added insult to injury by putting the feeder full of syrup in at one corner of the hive entrance. The colony was thus not only given an entrance far larger than it could satisfactorily defend, but an invitation was given to every robber in the county to come and get a share of sugar syrup.

Robber Bees Get Busy

Day after day when I got home from work I'd sit out by the hive and watch the bees flying to and from the hive apparently all working just as hard as they possibly could. It took quite a time but it finally dawned upon me that bees were coming from outside the hive and going into the feeder. They were also flying directly away from the feeder. But even with all this observation, the thing that made me decide to remove the feeder was the mere fact that I felt the bees had had more than their share of free lunch and that the time had come for them to get out on their own and get me some honey.

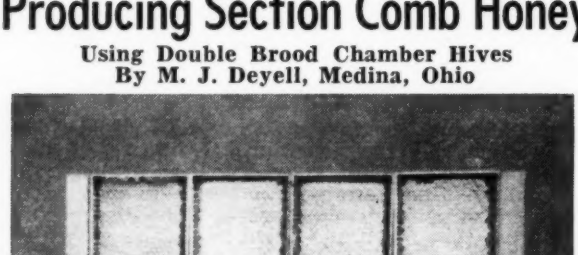
With the feeder removed, things seemed to get worse instead of better. I still had no more than four drawn combs and there was not much honey in these. With a steady stream of bees going in and out of the hive I just could not figure out why I was taking such a beating honeywise.

In retrospect, however, these bees

(Continued on page 315)

Producing Section Comb Honey

Using Double Brood Chamber Hives
By M. J. Deyell, Medina, Ohio



Four average sections from last year's crop.

What is so beautiful and appetizing as a section of comb honey? It is one article of food that cannot be duplicated. It seems to have a universal appeal. Many people who say they do not care for extracted honey do like comb honey.

During the past 14 years, we have been experimenting with different methods of producing section comb honey. Our experiences have led us to believe that it is entirely possible and practical, in northwestern Ohio at least, to produce comb honey over a double brood-chamber colony. This obviates the necessity of reducing a two-story colony down to a single-story, also solves the problem of disposing of the extra story at the beginning of the main honey flow. It simplifies manipulation. We do not recommend double brood-chamber colonies for comb honey unless the colonies are very populous,—boiling over with bees, and with conditions favorable for nectar secretion.

Type of Super Used

We have been experimenting with the shallow super which will hold 32 4 x 5 x 1⅜ inch sections. Instead of putting in the 32 sections, we use 24, making six rows of sections in each super instead of eight. (See cut.) We use two shallow extracting frames in each section super, one on each side of the sections. These frames should contain either full sheets of foundation wired, or drawn combs, preferably white virgin combs. It is necessary to use nine fences in each super. (See accompanying illustration.)

These shallow combs on the sides of the sections serve as bait combs and attract the bees into the supers. As a matter of fact, the bees will start work on each side of the super, then gradually work toward the middle. We find that all of the sections are completely filled and capped over during a good honey flow.

This idea is not new. It was used some years ago. It appears to have some distinct advantages. When conditions are right, we can count on a full case of section comb honey from each super as well as two filled shallow extracting combs on the sides.

Manipulation During the Honey Flow

Prior to the beginning of the flow it is usually necessary to put on one or two extracting supers during the dandelion and fruit bloom honey flow to make room for incoming nectar and thus avoid congestion which is said to be the main cause of swarming.

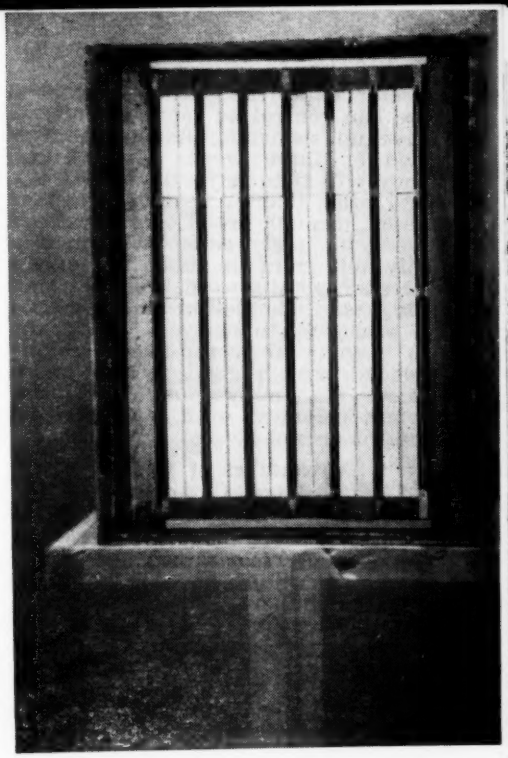
At the beginning of the main flow when comb honey supers are put on, the extra extracting super or supers put on earlier are removed, the bees shaken off the combs in front of each hive, then these supers given to colonies producing extracted honey.

Putting on Comb Honey Supers

Our colonies in these double brood chambers are usually so powerful that we have to put on two and sometimes three supers at one time. Last season, in western Ohio, one strong colony had brood in 15 stand-

ard combs, when the first comb honey supers were put on. We like to give the bees ample room, especially at the beginning of a good honey flow. It is amazing what a populous colony of bees will do in the way of drawing out foundation in comb-honey sections, in a relatively short time, when conditions are right. If we gave only one super, we would probably find queen cells at the end of six days or a week. We aim to check our comb-honey colonies regularly each week, for at least two or three weeks at the beginning of the flow, until the bees settle down to storing surplus honey and give up the idea of swarming.

The double brood chamber lends itself naturally to a number of manipulations for swarm control. For example, if, during the first examination of the brood chamber after supers are put on, we find queen

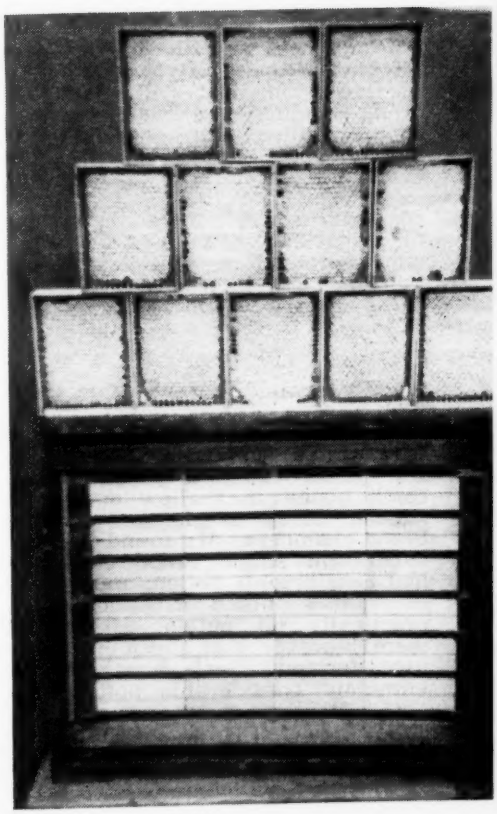


This shows a super with 24 sections in the center and two shallow frames on the sides. Bees will start to work in this super quite readily during a good flow.

cells being started or eggs in cups, we remove all queen cells and place one of the comb honey supers between the two brood chambers and leave the remainder of the supers on top. This breaks up or separates the area of brood in the double brood chamber and tends to relieve congestion.

This comb-honey super placed between the two deep brood chambers should not be left there longer than a week because the sections might become travel-stained. It should then be put on top with the other supers.

On the second inspection a week later, if the colony still has ideas of swarming, queen cells should be removed and the position of the two brood chambers should be reversed or interchanged. This usually causes the colony to give up swarming. Last season in Western Ohio in a 40-colony apiary run for comb honey we had only one swarm and it was a large swarm that was hived and would not stay put.



These 12 sections were picked out of a carton a few days ago. They are what we call choice or number one. We had many perfect or fancy sections better than these.

Our experience has been that if we can control or cause colonies to give up swarming during the first two or three weeks of the flow, they will then settle down to work, and after that it is unnecessary to check through brood chambers each week for queen cells. We can usually tell from the behavior of the bees, or, what some call, by entrance diagnosis, whether or not a colony is preparing to swarm. We do aim to have each comb-honey colony headed with a good prolific queen that is reasonably young. However, some colonies with two-year-old queens do not swarm.

Advantages of Double-Brood Chamber

(1.) It is obvious that a queen in a double brood chamber hive has more comb space for egg laying than she would have in a single brood chamber. Since congestion within the hive is said to be the prime cause of swarming, such congestion would naturally be relieved to a certain extent by using a double brood chamber hive. We have found that at the beginning of the honey flow, a good queen usually occupies from 12 to 15 combs in both brood chambers and rotates from one to the other. As the season advances and the flow tapers off, the queen is driven down into the lower chamber and the upper brood chamber then becomes a food chamber filled with honey and pollen for winter stores.

(2.) Furthermore, it has been our experience that the double brood chamber furnishes more comb space for the storage of pollen. In comb-honey production, this means that there is less likelihood of pollen being carried up into the sections than is the case with the single brood chamber. Some perfectly fine comb-honey sections are frequently spoiled because they contain a sprinkling of pollen in the cells. Double brood chambers help to eliminate pollen in sections. A few years ago we produced cut comb honey in shallow extracting supers, using single and double brood chambers. We found that the supers on single brood chambers had considerable pollen, and supers on double brood chambers had practically no pollen. It would seem, however, that queen excluders used for cut comb honey would eliminate considerable pollen.

(3.) It seems to us that a colony

A two-story colony ready for supers.

in a double brood-chamber hive is stronger throughout the season than one in a single brood-chamber hive. This means that such a colony is able to store more surplus than one in a single brood chamber, especially if the flow is long drawn out.

(4.) The main advantage in using the double brood-chamber hive in the production of section comb honey is that at the close of the season, after the surplus honey is removed, the colonies are ready to go into winter quarters so far as an adequate supply of stores is concerned. Furthermore, the stores which should include pollen as well as honey, are likely to be properly placed. This results in more successful wintering. It seems safe to say that most of the winter losses in the North, also weak colonies in the spring, are due to an inadequate amount of stores. Colonies short of stores—honey and pollen, in the fall—simply cannot winter successfully and build up into normal colonies the following spring. Most of the winter losses are due to starvation.

Beekeepers who produce section comb honey as well as extracted honey know that comb-honey colonies have more honey in the brood chambers late in the fall than colonies producing extracted honey. We are referring particularly to comb-honey colonies in single brood chambers operated under the so-called orthodox method. It will then be obvious that the double brood-chamber method for comb-

honey production should result in a superabundance of stores for winter and early spring requirements.

To digress a little at this point, it may be said that in operating colonies in two-story brood chambers for extracted honey, it is an advantage to place a queen excluder over the bottom brood chamber during the latter part of the season in order that the upper chamber, usually called the food chamber, may be well filled for winter. This procedure applies especially to areas where there is no heavy late honey fall flow. This queen excluder separating the two brood chambers should be removed late in the fall to give the bees an opportunity to arrange their stores in the double brood chamber to their liking.

Getting back to comb-honey production, it seems to me that we should adopt a method involving the very minimum of expense and labor. I have tried to think of a definition for successful beekeeping and have arrived at the following: Successful beekeeping is producing maximum crops of honey at a minimum of expense.

Now I realize that there are a number of good methods of producing section comb honey and I am not saying that the method here described is the best. I do suggest, however, that those of you who are producing comb honey or who intend to produce it in the future, should try this method and equipment to see how it works.

Short Course at Pennsylvania State College, Aug. 16-22, 1952

By Prof. E. J. Anderson, State College, Pa.

Students of 1951 Short Course, examining colonies in a college apiary.

Considerable new equipment has been designed and built since the time of the 1951 Short Course. This equipment will be used to teach those taking the Course in 1952 the latest in preparing honey for market.

The program, as a whole, will be conducted along the lines followed in previous years which consists of lectures each morning and work in the apiaries with the bees, and in the laboratory with honey in the afternoon. The Course will close on Friday afternoon and will be followed with a banquet at 6:00 P. M.

The Pennsylvania State Association meeting will also be at the College on Saturday, August 23rd, the day following the completion of Short Course.

The speakers for the Course will be George Rea, W. W. Clarke, and Edwin J. Anderson. The cost is $7.50 for residents of Pennsylvania and $12.50 for those from outside the state. Those attending the Course last year came from states as far distant from Pennsylvania as Florida, North Dakota, and Tennessee.

Decoy Hives and Stray Swarms

By A. V. Thomson, Gresham, Oregon

The practice of setting up decoy hives near an apiary for the express purpose of enticing swarms to occupy these hives is a reprehensible practice which is followed only by those who, at heart are nothing better than common thieves; no **beekeeper** would even consider such practice. The **bee pirate,** for such these gentry are sometimes called (or worse), is generally a shiftless fellow who makes free with other people's property and generally lives by sharp practices of various sorts. He locates his decoy hives near to some apiary, visits them with honey "spiked" with a little anise oil, and if the beekeeper does not follow some method of swarm control, he probably will lose several swarms that he would, even without swarm control, have recovered.

This "legalized robbery" is perfectly within the law, all that is necessary is for the **bee pirate** to secure permission from the owner of the land to set his decoy hives on the land and he is legally protected. He can even set them along the highway, though, if I am not mistaken, he cannot come in front of one's own property.

Decoy Hives Went Down the River

However, things sometimes do happen to such individuals, as note: Years ago, one of these pests set up his decoys on a neighbor's property not over 20 feet from my apiary of 20 colonies, hoping to **steal** some nice Italian bees. His chances were good for I knew nothing about real swarm control. I consulted my father, who was at that time county attorney for that county, and he informed me that there was no legal remedy. "But," he added with a knowing smile, "there is the primitive law."

Well, believe it or not, those decoy hives vanished completely that very night. I understood that they found their way to the river and floated away. At any rate, no more decoy hives were set up at that place.

Mr. Bee Pirate seemed much displeased next morning, and although he said nothing, I actually believed, from his actions, that he thought I was a law breaker. But he gave up the idea of setting up decoy hives at that location.

However, there is a very good use for decoy hives, and a profitable one.

About the last of April, in this locality, fine swarms very often emerge. These are generally "starvation swarms" and generally occur as the result of too close robbing by beekeepers during the previous season. They generally are **big** swarms, comprising a whole colony and sometimes weigh ten pounds or more. A hive filled with good dark combs left in a convenient place in the apiary will often be occupied by such a swarm and, with a very little care, will be in production with the rest of the apiary.

Huge Early Swarm Does Good Work

Late in April, 1945, I had prepared a hive for a division I intended making, but I had to let it wait a couple of days and when I went down to "operate", I found a **huge** swarm of strays in possession and busily engaged in house cleaning. I was somewhat "peeved" and said a few things, then I decided to become friends with the new animals. I fed them liberally and gave them a comb of sealed brood. A little later I gave them a Carniolan queen and they gave me two shallow supers of fine comb honey that season, the same as my other bees, also the same increase. I had to prepare another hive for the division, but I received a good colony of bees, two shallow supers of honey and two twin nuclei for that little trouble (really a pleasure). Those bees paid a big dividend.

Another instance: One warm day, a couple of days later, but in that same 1945 month of April, I was working with my bees, when a little nine-year old girl, the daughter of some friends, came rushing down to the apiary all out of breath.

"Oh, Unkie! Hurry up quick up to our place! I got an awful big bunch o' bees in an old box! Hurry up! They'll all smother!" I decided I would make a beekeeper of her. I had a good standard dimension home-made hive with good combs, but no bees. She had intended to give the bees to me, but when I suggested that she keep the bees and I would loan her the hive, she was greatly pleased.

"But," I said, "if you don't take

care of your bees as I tell you, I'll dump your bees out of my hive and take it home. If you do, both the bees and the hive are yours."

I took the hive with two combs of honey and one of brood, and what equipment we needed, including a queen trap, and we proceeded to her home. I placed the hive where her mother said it would be out of the way and the little miss coolly picked up the box (a big pasteboard carton) and dumped the bees onto the hive. They immediately moved in and we placed the queen trap in place.

She was the proudest youngster in the neighborhood and when I told her she should get as much honey from her bees as I did from any one of my colonies, she was certainly elated. She got two shallow supers of cut comb honey. She is now "eleven, nearly twelve," has seventeen colonies of fine Carniolans and is quite a beekeeper—she certainly takes care of them. I have up to this (1947) season reared her queens for her, but this year she reared her own, both for her own increase and for some she sold. Her mother and father are very proud of her, and justly so. These bees paid **big** dividends.

In this district any swarm, if not too small, will, with ordinary care, build up to strength for successful wintering if not taken later than the first week in August.. The early summer swarms will generally be ready for the fall flow and those taken in April, if larger ones, will be ready for the early flow.

Two instances of what can be done with very small swarms: In February, 1945, I was told that a "little bunch of bees the size of a base ball" was hanging on a little tree "down the railroad track back of the hog lot". I investigated, found the swarm, and took them home in a paper bag.

I have several shallow hives containing six frames each which I use for various special cases and I took one of these, equipped it with two frames of pollen and four frames of honey. Installed the little swarm in their new home, set them over a good colony after opening the bee escape hole in the inner cover and placing the double screened frame on top of this colony, then set the little hive on top with a cleat to close the remaining space. The weather was mild and the little swarm went bravely to work. By April 1st, that little hive was almost bursting with good, hard-working young bees. These bees were all transferred on this date to another hive and a good Carniolan queen introduced. A queen excluder was placed on top of the hive and the little hive set on top with a cleat to close the extra space. As soon as the brood had emerged, the little hive was removed, all bees brushed out and a second story set on. They were a big fine colony, and **waiting** when the early flow started; they yielded the same average in both honey and increase as the rest of my bees.

Rather late in August of the same year I found a litte cluster of bees alongside the highway on a small bush. I "hived" them in my handkerchief and took them to my apiary.

Again a little hive was put into commission, loaded up with honey and brood and set on a stand by itself. By the time the other bees were ready for winter, this little swarm, having been requeened with a good Carniolan queen, was a fine story-and-a-half colony in the best of order. I gave them another half story of stores and they wintered as well as any of my bees and came out as "just another good colony" in the spring.

While, perhaps the extra "monkey doodle business" attached to the care of these little swarms may not pay, at the same time there is a lot of satisfaction in the fact that one has "made something out of nothing"—or out of very little. It is fun.

While it is doubtful if these tiny swarms are worth while, it definitely does pay to hive all swarms (in this district) up to August 10th.

It also pays to keep an empty hive or two sitting around for strays. Look them over once in a while and keep wax moths out.

JUST NEWS

We have been concerned about flood conditions in the mid-west. Without a doubt many hives of bees near rivers on the rampage have gone down stream. Latest word from Sioux City Honey Association and The A. I. Root Co., Council Bluffs, (April 18) is that no serious damage has been done to their plants.

It Pays to Capture a Swarm

The accompanying pictures sent to us by M. H. Sparks, Brownwood, Texas, are characteristic of what happens over the country at swarming time.

Swarms do cluster in peculiar places and we run on to them when we are not looking for them. Now let us suppose Mr. Sparks had not bothered to capture this swarm. Of course, some one else might have put it into a hive, or, it might have moved on and found a home between the walls of a dwelling house, or in some hollow tree.

But Mr. Sparks decided to put the bees in a hive and how comparatively easy it was to do this, much easier than it would have been had the swarm clustered in the top of a tall tree.

Note how gentle the bees are. They can be handled easily without much danger of being stung. The bees are filled with nectar and are not in the mood for stinging.

Mr. Sparks did not say how he got the bees off the fence posts and in front of the hive but it seems probable he gave the post a vigorous kick to dislodge the bees. Fortunately the post was bent over so

as to bring the bees quite near to the hive entrance.

A beekeeper who already has some bees can take a comb containing honey and brood from one of his hives to put into the middle of the hive intended for the swarm. Be sure the queen is not on this comb. The brood and honey will attract the bees into the hive and they will get established quickly.

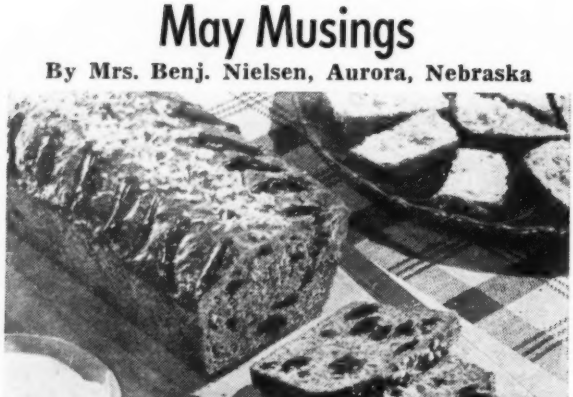
If there is a good honey flow on, the bees will soon fill the brood chamber with honey and pollen and the queen will usually start laying in the center combs and extend the brood nest to occupy seven or eight combs. It is usually necessary during a good flow to put on one or more supers—the number depending on the size of the swarm and the intensity and length of the honey flow.

There must have been a good honey flow on after this swarm was hived, judging from the appearance of the two combs being held by Mr. Sparks. They look like freshly drawn virgin combs.

Yes, it pays to have a few extra hives on hand for stray swarms, for who knows — this coming season may be a swarming year.

May Musings

By Mrs. Benj. Nielsen, Aurora, Nebraska



Honey fruit bran bread. Chopped nut meats along center of unbaked batter add festive touch.—Photo courtesy Kellogg Co.

Family tired of all the old standbys? Appetites picky? It's just that in-between time that calls for a snappy change.

Along about this time of the year the Nielsens think there is nothing like this special spring salad to whet lagging appetites! Bright, colorful, a breath of spring itself and oh so tasty. The honey dressing may be used again and again if it is drained off each time and refrigerated until needed again. To make it, heat one cup vinegar to boiling point, add ¾ cup honey and 1 teaspoon salt, then stir until honey is blended with vinegar. No stringent rules need be followed about the salad. We use shredded head lettuce, tomatoes, cut in small pieces and unpeeled, fresh green onions, finely sliced, diced cucumber, and thinly sliced red radishes, if digestion permits. All ingredients, including dressing, should be thoroughly chilled, then pour over dressing, adding pepper to taste, if desired (perhaps a bit more salt) toss gently and serve. Be sure to make plenty because the more you eat, the more you want!

In addition to perking up appetites, the recipes chosen this month contain the honey that furnishes the quick-energy so necessary to thwart that old spring-fever feeling.

Honeyed Sweet Potatoes and Apples

Two cups boiled sweet potatoes, sliced thin, 1½ cups tart apples, sliced thin, ⅓ cup honey, 4 tablespoons butter, and 1 teaspoon salt.

Place half the potatoes in buttered baking dish. Add half the apples, drizzle with half the honey, dot with half the butter and sprinkle with half the salt. Repeat. Cover. Bake 30 minutes, in moderate oven, 350 degrees F. Uncover and bake until apples are soft and top is brown. Serves 6.

Honey Fruit Bran Bread

One egg, well-beaten, ⅔ cup honey, 1 cup buttermilk, 1½ cups bran, 2 cups sifted flour, 2 teaspoons baking powder, ½ teaspoon soda, 1 teaspoon salt, 1 cup dates, and ½ cup chopped nutmeats.

Combine egg, honey, buttermilk and bran. Sift flour with baking powder, soda and salt; add to first mixture with dates and nutmeats. Stir only until flour disappears. Bake in greased loaf pan, with waxed paper in bottom, in moderate oven, 350 degrees F., about 45 minutes. For a nice variation one-half cup each of dates and figs may be used, or one-half cup each of dates and raisins.

Honey Rhubarb Pie

Two cups rhubarb, ¾ cup honey, 3 tablespoons flour, 1 egg, and plain pastry.

Cut rhubarb in ½-inch pieces before measuring. Blend honey, flour, and egg and add to rhubarb, stirring to coat thoroughly. Bake between crusts or in one crust with lattice strips of pastry across top. Makes one 9-inch pie.

Second Glances — C.M. Isaacson

"Ultra-modern beekeeping", might be a substitute title for James Tamplin's article (page 201) for while it is not too unusual for a beekeeper to own an airplane, it is out of the ordinary to use it as transportation in the actual care of the bees. There is an appropriateness though, for the bees themselves are creatures of the air in large measure. Two other statements by Mr. Tamplin might make one envy a bit — that there is no wintering problem whatsoever in Guatemala and "eternal spring" (a constant flower bloom all the year) — were it not for his mention of other factors that detract from a would-be paradise. The ants, termites, rainy season, the difficulty of ordinary transportation, and the lack of local market because of the low living standards of the native population, all are problems to be met. So it is, always, and everywhere.

A new beekeeper was born, one is almost tempted to say when we read Mr. Karraker's account of leaving all his first year's honey with his bees, regardless of a very understandable desire to actually experience some of the "fruits" of his work. Or perhaps I should much better say "their work", for very real credit must go to his wife for her feat in installing both packages successfully, despite never having seen a package of bees or an opened bee hive before (page 206). She had real courage (and affection for her husband!).

Let's prove our belief in beekeeping, says Editor Deyell in his report on page 207. It is a pertinent article and one worth careful reading —and re-reading. How much enthusiasm do we really have? Do we **talk** bees and honey intelligently —have we prepared ourselves by learning all we can through careful observation, reading, conversation, and sharing of ideas with fellow beekeepers at meetings and at our homes or shops? Do we want enough to really know and use the most efficient and satisfactory methods? Do we keep up with new uses of honey and other bee products? And a most important item—do we as beekeepers demonstrate that we believe in honey by using worthwhile amounts of it in our own families? If we can answer in the affirmative to much of this, we will actually have that enthusiasm that makes our work a pleasure.

Section comb and shallow extracting supers are ideal equipment for those who would rather not, or are unable to lift the heavier full-depth units. With hives thus equipped, there is no reason why a woman could not do as well as anyone if she is interested in the actual care of bees. Mrs. Waldron, with her additional knowledge of plants, should be especially qualified, and we all wish her much success (page 210).

Workers do destroy queen cells—large numbers of them—but may I add a word, Mr. Pease (we have had friendly "words" before)? Newly emerged virgins are not by any means always "so weak that they stagger in their walk". I have very often seen them bright and very lively immediately after "popping out of the cell". In fact, upon occasion when they have been kept confined by the bees for a period and my intrusion dispersed the guards around the cell tip, I have seen them even take a short flight, so rapid was the rush from the cell "prison". They were well able to dispose of rivals and I have actually seen them tear a hole in another cell. That record book idea is very good, though, and the mention of the sometimes surprisingly large number of queen cells a colony will build can be told of by others also, I believe (page 212).

Both gluing and nailing a frame sounds like a fine idea, Propolis Pete. Many of us have had that annoyance (!?) of a top bar pulling loose, etc., when we try to pry out that first frame from a hive (page 214).

Save all beeswax possible (page 220). That is an oft-repeated bit of advice but always a sound one. It is surprising how the "little" scraps can count up if systematically saved.

The new price support program more nearly meets beekeepers' requests, even though the price is less than asked for (page 224). As the Editor says, it is now up to us as an industry (and that means as individuals first) to use this program as an aid and NOT a permanent crutch. Too high a **guaranteed** price would actually not be desirable, for the temptation to merely let the government have the honey would be much greater.

A Talk to Beginners

M. J. Deyell

Keeping Bees by "Rote"

Apparently, many beekeepers carry the idea that in order to secure a crop of honey they should do certain things in the apiary at certain times of the year, regardless of weather or other conditions. Some backlot beekeepers may not pay much attention to their bees, perhaps are not as interested as they should be in securing the maximum crop of honey, and may not think about putting on supers until they find a swarm hanging on the plum tree.

A friend of mine tells about a neighbor beekeeper of his happening along one day after the main honey flow had been on for about ten days. This neighbor beekeeper said, "I suppose it will soon be time to put on supers?" My friend said, "Great guns, man, haven't you put on any supers yet? My bees have already put up part of a good crop of honey." It is doubtful if this backlot beekeeper would ever wake up to the importance of planning ahead and having all colonies up to the very peak of strength at the beginning of the main flow in order to secure the maximum crop.

About a dozen years ago, when we had a number of apiaries in Western Ohio to take advantage of the sweet clover that was prevalent at that time, I went out on a scouting expedition to secure a new apiary site. As I drove along the road I came on to a small apiary in a front yard near a dwelling house, so I turned in to talk with the beekeeper. He was an elderly gentleman who produced, or tried to produce, section comb honey. He was kind enough to show me his equipment and to explain his apiary management. He practiced strict economy. No full sheets of comb foundation were used in his apiary. He used only one inch starters in the brood chambers and supers. Naturally, he had thousands of useless drones in his apiary because he did not have good combs in his brood chambers.

I think he was in one of the best beekeeping locations I have ever seen. There was sweet clover, yellow and white varieties, alsike clover, Dutch white clover, and alfalfa in all directions.

Jack Deyell

Of course he did not know that I had a yard of 75 hives about six miles from him, nor did he ask me my name. I said to him, "I suppose you get some good crops once in a while in this location?" He replied, "Yes, some years are pretty good for honey. Most years I get one super of comb honey, but a few years ago I had to put on the second super." If I had told him that at that very moment I had colonies six miles from him that had around 300 pounds surplus, I don't suppose he would have believed me.

Now it is a fact that there are too many beekeepers who do things by "rote" and this reminds me of the character that used to appear on the comic page. It was "Jerry on the Job." Some of you older readers will remember it. Well, Jerry, in one cartoon was an inspector of railroad car wheels at the depot. He had a big hammer and would pound the wheels of each car to see that they were sound and not cracked. One day a friend of Jerry's asked him why he pounded the car wheels. Jerry replied, "To tell the truth, I don't know, but the boss told me to do it."

Now, I grant there are a number of things pertaining to beekeeping, such as bee behavior, nectar secretion, etc., that we do not thoroughly understand. We do not have to understand all of these things perfectly to secure a crop of honey, but we should learn, from experience, or otherwise, just how and when to perform certain manipulations in

the apiary in order to work with the bees to assist them in doing their best work. As I have said in other talks, we can't make the bees do anything. We have to work with them in order to make it easy as possible for the bees to do their best work. That, in the final analysis, is intelligent apiary management.

One of My Colonies Starved

I hate to have to admit this, but it is a fact and it was my own fault. I should have been more careful last fall about leaving an ample amount of honey on this hive for winter and early spring food. Sometimes in the fall when we heft our hives, by lifting one end, we are mistaken as to the actual amount of honey in each hive. We must realize that a few combs of pollen help to make up the total weight and this should be taken into consideration when estimating the approximate amount of honey. When I saw this large cluster of dead bees with their heads in the cells and not a drop of honey in the combs I felt like kicking myself. I suppose some of you readers have had a similar experience and know just how I felt. Now if I had been like Mr. Rahmlow of Madison, Wisconsin, who checks through his colonies during February, on a warm day, to investigate the food situation, I might have saved this colony.

I do believe that some colonies consume more stores than others during the winter. For example a colony headed by a young queen introduced during the late fall will likely have a considerable amount of brood rather late in the season. If there is an abundance of pollen in the combs and on top of this, the winter is mild, food consumption is likely to be high. I have observed that bees consume less stores during a very cold winter than they do during a mild winter.

But on this matter of stores, if each of us would see to it that each colony has a deep food chamber crammed full of honey and pollen, with perhaps 20 pounds of stores in the lower story, this amount is likely sufficient to last the bees during the early spring months and if the spring season should be favorable for a spring honey flow from dandelion and fruit bloom, it would be unnecessary to do any feeding at all. One way to help insure having a well filled food chamber is to place a queen excluder underneath it during the late summer and fall months.

Apple tree in full bloom with bees nearby to pollinate blossoms.

Of course, there must be enough honey coming in to help insure having the food chamber well filled. If colonies during the fall months consume more than they gather, feeding must be done.

Some Experiences

Knowing I had to make a trip down into North and South Carolina for bee meetings on March 12th and 14th, I made a round of my four yards, about 80 hives in all, on March 10 to see that they were alive and in good condition. I found one colony dead with honey in the combs. I suspect something must have happened to the queen late last season. As already stated, another colony starved to death. I looked into a few normal colonies that day, March 10th, and found brood in about two or three combs.

(Continued on page 286)

Who's Who in Apiculture

To supply a handy reference of the names and addresses of state and provincial apiary inspectors, secretaries of beekeepers' associations, extension workers in beekeeping, and other information often needed by our readers, we have corrected our Who's Who in Apiculture as of April 1, 1952.

State or Province	Beekeeping Taught in Agri. Col.	Bees on Combs Admitted	Net Weight Law		Inspector State or Province	Secretary State Association
			Extracted	Comb		
Ala.	Yes	No	Yes	Yes	C. A. North, Montgomery	F. E. Guyton, Auburn
Alta.	No	Permit	Yes	No	W. G. leMaistre, Edmonton	W. G. leMaistre, Edmonton
Ariz.	No	Cert.	Yes	Yes	Paul R. Grant, Phoenix	C. L. Benson, Phoenix
Ark.	Yes	Cert.	Yes	Yes	J. H. Davis, Little Rock	Rea H. Davis, Little Rock
B. C.	No	No	Yes	Yes	John Corner, Vernon	W. H. Turnbull, Vernon
Calif.	Yes	Cert.	Yes	Yes	H. M. Krebs, Sacramento	A. K. Whidden, Corona
Colo.	Yes	Cert.	No	No	Albert L. Crouse, Denver	Gene Wadleigh, Monte Vista
Conn.	No	Cert.	Yes	Yes	M. P. Zappe, New Haven	Chas. Rost, Meriden
Del.	No	Cert.	No	No	John W. Dukes, Dover	John W. Dukes, Dover
Fla.	Yes	Cert.	Yes	Yes	H. S. Foster, Gainesville	S. J. Hatcher, Delray Beach
Ga.	No	Permit	Yes	Yes	None	
Idaho	No	No	No	No	C. F. Feeler, Nampa	R. M. Shaver, Gooding
Ills.	Yes	Cert.	Yes	Yes	Carl E. Killion, Paris	Hoyt Taylor, Pleasant Plains
Ind.	No	Cert.	Yes	Yes	Gilbert Perigo, Indianapolis	Gilbert Perigo, Indianapolis
Iowa	Yes	Cert.	Yes	Yes	F. B. Paddock, Ames	H. W. Hansen, Dakota City
Kans.	Yes	Cert.	No	No	R. L. Parker, Manhattan	W. T. Roberts, Kansas City
Ky.	No		No	No	E. M. Miller, Eastwood	Herman Lose, Louisville
La.	Yes	No	No	No	S. J. McCrory, Baton Rouge	V. K. Van Guilder,
Me.	Yes	Cert.	Yes	Yes	R. B. Swan, Brewer	Wm. C. Grindle, Ellsworth
Man.	Yes	Permit	Yes	Yes	Prov. Apiarist, Winnipeg	D. R. Robertson, Winnipeg
Md.	Yes	Cert.	Yes	Yes	Geo. J. Abrams, College Pk.	Geo. J. Abrams, College Pk.
Mass.	No	No	Yes	Yes		W. R. Parker, W. Boylston
Mich.	Yes	No	Yes	Yes	D. P. Barrett, Shepherd	Mrs. Geo. Seidelman, Ionia
Minn.	Yes	Cert.	Yes	Yes	C. D. Floyd, St. Paul	Robert Banker, Cannon Falls
Miss.	Yes	Permit	Yes	Yes	Homer Tate, State College	Homer Tate, State College
Mo.	Yes	None	Yes	Yes	None	V. F. Burk, Columbia
Mont.		Permit	Yes	Yes	J. H. Pepper, Bozeman	Mrs. O. R. Burdett, Laurel
Nebr.	Yes	Cert.	Yes	Yes	Lee Rents, Lincoln	Edw. A. Wolfe, Atlantic
Nev.	No	No	Yes	Yes	Geo. G. Schweis, Reno	No association
N. B.	Yes	No	Yes	No	Ersel F. Moore, Fredericton	Reade Ferris, Fredericton
N. H.	Yes	Cert.	Yes	Yes	J. G. Conklin, Durham	Paul Knight, Manchester
N. J.	No	Cert.	Yes	Yes	Paul L. Holcombe, Trenton	M. H. Stricker, Annandale
N. M.	No	Cert.	Yes	Yes	J. R. Poe, State College	Ersel C. Edwards, Los Lunas
N. Y.	Yes	Cert.	Yes	Yes	A. C. Gould, Albany	Mrs. E. T. Cary, Syracuse
N. C.	Yes	Cert.	Yes	No	James F. Greene, Raleigh	Eugene B. Finch, Raleigh
N. D.	Yes	Permit	Yes	No	R. L. Post, Fargo	Rudolph Otterson, Fargo
N. S.	Yes	No	Yes	Yes	E. A. Karmo, Truro	Evan D. Craig, Kentville
Ohio	Yes	Cert.	Yes	Yes	S. E. Bailey, Columbus	
Okla.	Yes	Cert.	Yes	Yes	Clyde A. Bower, Okla. City	Carl Blackwell, Bethany
Ont.	Yes	Permit	Yes	No	P. W. Burke, Guelph	G. F. Townsend, Guelph
Ore.	Yes	Cert.	Yes	Yes	A. Burr Black, Salem	Oliver W. Petty, Albany
Pa.	Yes	Cert.	Yes	Yes	Harry B. Kirk, Harrisburg	H. M. Snavely, Mt. Pleasant
Que.	No	No	Yes	No	Jules R. Methot, Quebec City	A. Prud'homme, St. Isidore
R. I.	No	Cert.	Yes	Yes	Howard A. Pike, Providence	J. G. Levitre, Woonsocket
Sask.	No	No	Yes	No	J. H. Arnott, Regina	R. M. Pugh, Tisdale
S. C.	Yes				W. H. Purser, Clemson	J. E. Hegler, Kershaw
S. D.	No	Cert.	Yes	Yes	Gerald W. Miller, Pierre	Gerald W. Miller, Pierre
Tenn.	No	Cert.	Yes	Yes	L. H. Little, Nashville	L. H. Little, Shelbyville
Texas	Yes	Cert.	Yes	Yes	F. L. Thomas, College Sta.	Stanley Weaver, Navasota
Utah	Yes	Cert.	Yes	Yes	J. I. Curtis, Salt Lake City	J. I. Curtis, Salt Lake City
Vt.	No	None	Yes	Yes	R. M. Meade—Frank Stearns	Charles Mraz, Middlebury
Va.	Yes	Permit	Yes	Yes	H. W. Weatherford, Rich.	J. M. Amos, Blacksburg
Wash.	No	Permit	Yes	Yes	C. F. Turnipseed, Bryant	Charles Becker, Outlook
W. Va.	No	Cert.	Yes	Yes	None	No association
Wisc.	Yes	Permit	Yes	Yes	John F. Long, Madison	Mrs. L. Brueggeman, Men. F.
Wyo.	No	Permit	Yes	Yes	George B. Harston, Powell	George B. Harston, Powell

United States—Investigation and Demonstration in Beekeeping, James I. Hambleton, Bureau of Entomology and Plant Quarantine, Beltsville, Md.; Southern States Field Laboratory, W. W. Whitcomb, Baton Rouge, La.; Pacific Coast Laboratory, George H. Vansell, Davis, Calif.; Inter-Mountain Laboratory, A. P. Sturtevant, Laramie, Wyo.; Bee Culture Field Station, C. L. Farrar, Madison, Wisc.; University of Arizona, Frank E. Todd, Tucson, Ariz.; Research centers: Logan, Utah, George E. Bohart; Columbus, Ohio, A. W. Woodrow; San Antonio, Texas, A. H. Alex; Corvallis, Ore., H. A. Scullen; Bee Breeding Station, Kelley's Island, Ohio, W. C. Roberts.

Production and Marketing, U. S. Department of Agriculture—Harold J. Clay, Washington, D. C., Marvin Webster, Assistant.

Dominion of Canada—Investigation and Demonstration in Bee Culture, Cecil A. Jamieson, Dominion Apiarist, Experiment Farm, Ottawa, Canada; Bee Breeding Station, Pelee Island, Ontario, Prof. G. F. Townsend in Charge.

Apiary Inspectors of America—President, F. B. Paddock, Ames, Iowa; Sec.-Treas., F. L. Thomas, San Antonio, Texas.

American Beekeeping Federation—President, Glen Gibson, Minco, Okla.; Vice-President, Clarence Langley, Red Wing, Minn.; Sec.-Treas., Glenn O. Jones, Atlantic, Iowa.

Bee Industries Association—President, Gordon Frater, Watertown, Wisc.; Secretary, Frank Swanson, Council Bluffs, Iowa; Treas., Baxter Woodman, Grand Rapids, Michigan.

Southern States Beekeepers' Federation—President, L. A. M. Barnette, Bellaire,Texas; Vice-President, Paul Cutts, Chipley, Florida; Secretary-Treasurer, Stanley Weaver, Navasota, Texas.

American Bee Breeders' Association—President, Paul Cutts, Chipley, Florida; Vice-President, Leslie H. Little, Shelbyville, Tenn.; Secretary-Treasurer, D. C. Babcock, San Antonio, Texas.

American Honey Institute—Chairman, R. F. Remer, Sioux City, Iowa; Director, Mrs. Harriett M. Grace, Madison, Wisconsin.

Honey and Pollen Plants Committe—Chairman, Dr. S. W. Edgecombe, Logan, Utah.

Canadian Beekeepers' Council—President, Peter Kowalski, Edmonton; Secretary-Treasurer, Roy Pugh, Tisdale.

Extension Specialists in Beekeeping—Alabama, W. A. Ruffin, Auburn; Alberta, W. G. leMaistre, Edmonton; British Columbia, John Corner, Vernon, and V. E. Thorgeirson, New Westminster; California, J. E. Eckert, Davis; Connecticut, Elbra Baker, Brooklyn; Delaware, L. A. Stearns, Newark; Florida, J. D. Haynie, Gainesville; Georgia, Buck Neville, Athens; Illinois, V. G. Milum, Urbana; Iowa, F. B. Paddock and R. J. Walstrom, Ames; Manitoba, Provincial Apiarist, Winnipeg; Maryland, G. J. Abrams, College Park; Michigan; E. C. Martin, E. Lansing; Mississippi, A. G. Bennett, State College; Missouri, V. F. Burk, Columbia; New Brunswick, E. F. Moore, Fredericton; New Hampshire, J. R. Hepler, Durham; New Jersey, R. S. Filmer, New Brunswick; New York, W. S. Coggshall, Ithaca; North Carolina, W. A. Stephen, Raleigh; North Dakota, W. J. Colberg, Fargo; Nova Scotia, E. A. Karmo, Truro; Ohio, C. A. Reese, Columbus; Oklahoma, C. F. Stiles, Stillwater; Ontario, G. F. Townsend, Guelph; Oregon, H. A. Scullen, Corvallis; Pennsylvania, W. W. Clarke, State College; Saskatchewan, J. H. Arnott, Regina; South Carolina, W. E. Johnson, Clemson; Virginia, John M. Amos, Blacksburg.

Professors in Charge of Courses in Beekeeping—Alabama, F. E. Guyton, Auburn; Arkansas, D. J. Hays, State College; California, H. H. Laidlaw, Davis; Colorado, J. O. Moffett, Fort Collins; Florida, J. D. Haynie, Gainesville; Illinois, V. G. Milum, Urbana; Iowa, O. W. Park and F. B. Paddock, Ames; Kansas, R. L. Parker, Manhattan; Louisiana, Warren Whitcomb, Baton Rouge; Maine, C. O. Dirks, Orono; Manitoba, A. V. Mitchener, Fort Garry; Maryland, George J. Abrams, College Park; Massachusetts, Frank R. Shaw, Amherst; Michigan, E. C. Martin, E. Lansing; Minnesota, M. H. Haydak, St. Paul; Mississippi, C. A. Wilson, State College; Missouri, Leonard Haseman, Columbia; Nebraska, O. S. Bare, Lincoln; New Hampshire, J. G. Hepler, Durham; New York, W. L. Coggshall, Ithaca; North Dakota, Julius R. Anderson, Fargo; Nova Scotia, E. A. Karmo, Truro; Ohio, W. E. Dunham, Columbus; Oklahoma, G. A. Bieberdorff, Stillwater; Ontario, G. F. Townsend, Guelph; Oregon, H. A. Scullen, Corvallis; Pennsylvania, E. J. Anderson, State College; South Carolina, W. C. Johnson, Clemson; Texas, F. L. Thomas, State College; Utah, M. D. Levin, Logan; Virginia, J. M. Grayson, Blacksburg; Wisconsin, C. L. Farrar, Madison.

Where we did not receive replies to our inquiries sent out we repeated last year's listing.

Laying Workers

By E. S. Miller, Valparaiso, Indiana

Some writers, continuing an old notion, assert or imply that to requeen a laying-worker colony one has only to shake out the bees at some distance from the hive. They assume that it is the laying workers that kill the queen and that they will not fly back. There is little or no evidence to support the assumption. It is a well-known fact that old bees do not take kindly to a strange queen and in a laying-worker colony the bees are all old and are almost sure to kill any queen introduced whether or not they are shaken out in the grass. In fact, it is difficult to requeen any colony where old bees predominate.

A practical way to dispose of a laying-worker colony is to unite it with a queen-right colony, placing it on top over a sheet of newspaper. In so doing the old bees are salvaged and may assist in gathering the crop. If a new colony is desired a nucleus may be started or a strong colony divided and a laying queen given to the part moved. The old bees then fly back, leaving only young bees which will readily accept the new queen. It does not pay to try to requeen a laying-worker colony.

[We agree with Mr. Miller. We have tried a method of uniting similar to that described. We set laying-worker colonies on top of normal colonies in the evening, with as little disturbance as possible and without newspaper between and have never found dead bees in front of hives the following day.—Ed.]

A TALK TO BEGINNERS

(Continued from page 283)

On April 1st I opened up a normal colony and found brood in five combs and plenty of young emerging bees.

Since April 1st we have had a rather cold spell, with snow in this vicinity. Yesterday, April 9th, I checked into a few colonies and found very little unsealed brood, some sealed brood, and practically no eggs in the cells. This shows what a cold spell during April can do to brood rearing. I wonder if the bees remove eggs from cells during a very cold spell. I suspect they do but have never actually seen the bees doing it. Perhaps some of you readers have.

All colonies are very populous in bees and there is ample time for these colonies to build up to good strength before the main honey flow begins early in June. I have observed that normal colonies are likely to gain about one comb of brood per week during the building-up period of spring. This means that strong colonies that now have brood in five combs should have brood in 14 or 15 combs by early June. Such colonies are likely to store any surplus honey if it is available.

My Trip to the South

I like to get away once in a while if for no other reason than to keep from getting into too deep a rut.

While riding with W. A. Stephen, beekeeping specialist of North Carolina, from Columbia, S. C. to N. C., we stopped to see J. L. Maul of Hamlet, North Carolina, who keeps about 55 hives of bees in four small yards. Mr. Maul was kind enough to take us to his yards and to open up some of his hives so that we could see the condition of colonies at that season of the year. That was on March 13th, a rather cool day. However, the bees were carrying in plenty of pollen and a little nectar. Normal colonies had from five to seven combs of brood and were building up rapidly.

Mr. Maul has an up-to-date honey house with good equipment, also sells honey from his home. His attractive roadside honey stand stops those who are interested in honey and results in many honey sales.

Feeding Granulated Sugar

In case some may think that this is a new idea, it should be said that the late A. I. Root fed dry sugar to bees about 75 years ago. In my opinion sugar syrup feeding is preferable especially when bees are needing a considerable amount of food and the weather is cool. The syrup should be near to the bees when weather is cool.

W. A. Stephen beside the honey sign in front of J. L. Maul's home.

A couple of weeks ago when going through my apiaries and hefting hives, I found a few that seemed rather light in weight. I had with me a large bucket containing some granulated sugar, so on each light hive I simply put two or three pounds of sugar on the inner cover, having the center block removed so the bees could easily get up through the hole to take the sugar. Of course, the outer telescope cover fits on top. Even though the weather was quite cool, most of the colonies I fed were taking the sugar when I examined these hives a few days ago. One or two of the colonies did not appear to be taking the sugar and on going into the brood chambers I was agreeably surprised to find a considerable amount of sealed honey in the combs.

It would appear then, that colonies that have ample amount of honey are not likely to take much of the sugar. And why should they? They are wiser than we perhaps think they are.

(Continued on page 311)

Live and Learn

By Propolis Pete

It's getting to the season where you have to do something if you expect to get anything. For instance, assuming that you don't have to scrabble around getting equipment ready, the matter of spring feeding.

I don't think that there is any phase of bee management on which I have changed my mind so often. One year I think that it is good and the next I think that it is bad. I used to feed my bees when I had the chance, and some years I made out pretty well, and some years I didn't. Then, in years when I either didn't get the chance or thought that it was unnecessary, I didn't feed, and some years the bees did well and some years they did badly.

I have always tried to leave more honey than the bees would need, and if I thought that they were on the light side, I would give them a pail or two of heavy syrup in late October or early November, as soon as the aster bloom was over. In the spring, if I found a colony that was running short, I fed them. But I noticed that a pattern seemed to be developing. The colonies that had some stores, but which were fed, did better than either the colonies that were destitute and fed and the colonies that were prosperous and not fed.

Last year I put in some packages on combs of honey and pollen, with some foundation, because I didn't have enough drawn combs to give them all combs. Naturally I fed them at the start. They built up nicely and because the second body was all foundation, I kept the feeders on, even though there was plenty of fruit bloom.

They were still taking syrup on June 15th, although they were losing interest in it and only a few would be in the feeder at a time. So I quit, since nectar was now coming in fast enough. Those packages gave me surplus, something that never had happened before. Was it coincidence that I got honey after feeding so long? Other years I stopped feeding when the locust bloomed on the theory that it was a waste of sugar when there was so much available within a few hundred feet of the hives.

On April 10th last year, I started to feed a couple of so-and-so colonies. While they each had about 20 pounds of honey, I put on a Boardman feeder just the same. Those two happened to be my best colonies when extracting time came around. Two other overwintered colonies which were well fixed, averaged around half of their production. Does that prove anything? I don't know. One year I fed all colonies regardless of their prosperity. I didn't get much honey at all that year. I was too busy from the end of May until the middle of July, climbing trees and uniting colonies. I did everything I could to stop it, but no luck. I was just about ready to post a copy of the Government Bulletin on swarm control in front of the hives, so that the bees could see for themselves what they were supposed to do, when it stopped abruptly. Up until then, even the swarms were swarming.

I have more time to do things this year, and am going to try feeding all colonies again regardless of their condition. It will cost 20 or 30 bucks for sugar, but I'll find something out (I hope).

Speaking of feeding — I prefer the Boardman feeder for spring. I use a very thin syrup, four pounds of sugar to a gallon of water. With an entrance feeder, you can see at a glance just how each colony is taking the feed, and you can check on their daily consumption without guessing. Incidentally, I often wonder why syrup formulas are spoken of as two to one, half and half, or one to two. Experienced beekeepers know what that means but not beginners. Does it mean by weight or volume? There is a vast difference in the weights of sugar and water by volume. And who has the facilities to weigh a bag full of water?

Anyway, getting back to Boardman feeders, some beekeepers don't like them because they don't hold enough or because they tend to induce robbing. The plea is guilty on both counts. On the question of robbing, however, a little care avoids that. Just block off the entrance a bit next to the feeder block so that there is only a small

(Continued on page 315)

Editorials

Export and Diversion Program Announced The United States Department of Agriculture has just announced the 1952 Export and Diversion Program. This allows the same subsidy as last year of 4-½c per pound to the shipper on honey exported. The domestic diversion program which permits a subsidy for new uses of honey has also been announced. The subsidy has been increased from 3-¾c to 4-½c per pound. This offers a challenge to the scientifically-minded beekeeper as well as the manufacturers of a variety of food products since honey lends itself to combining with a great many foods.

It was hoped that specific support ceilings for honey would have been released for publication by the time Gleanings went to press. However, as yet no further announcement has been made beyond that appearing on page 224 of the April issue of Gleanings. It is supposed that price differentials will be based on those honeys acceptable for table use and those not acceptable as was the case during the 1950-1951 programs. It is also expected that regional price differentials will be in effect.

* * * * *

County Beekeepers' Associations Last evening we attended a meeting of the Lorain County (Ohio) Beekeepers' Association which was started in 1919, 33 years ago, and hasn't missed a monthly meeting since. That is a remarkable record and it is doubtful if any other association in this or other countries can boast of such a record. If there is another such association we would like to know about it.

Monthly meetings are held in homes of beekeepers. Informal programs are arranged with an occasional out of town or state speaker.

Our Medina County Beekeepers' Association formed last November is still going strong. One secret of success seems to be member participation. We have panel discussions on timely or seasonal topics.

Two or three people on the panel will open up the topic, then others from the audience feel free to participate in the discussion. We have a light lunch following each meeting. This helps to get people acquainted.

As we have said before, county and state associations are a part of the back bone of our industry and should be encouraged.

* * * * *

More Grass Land Should Mean More Honey A few years ago the U. S. Department of Agriculture considered returning 45,000,000 acres of land from grain crops to grasses, in order to increase soil fertility and help to control erosions. We are unable to say without investigating, how this project is going along but some progress is doubtless being made.

When we attended a meeting of farmers a few nights ago and heard the Farm Bureau Agent telling about the present trend — to use more clovers and grasses and less grains in foods for stock, especially for dairy herds, it seemed apparent that there is a definite trend in favor of more grasses on farms, not only because they benefit soil but also because of greater food value.

During the meeting a picture of a field of clover in bloom was shown and we actually saw a bee on a clover head.

A few years ago it was estimated that two 140-acre farms are carried down Old Man River to the Gulf of Mexico each 24 hours. More grass land and less grain land should help to save such a fearful waste of soil.

When more clovers and less grain crops are planted, not only will the fertility of the soil be improved and erosion controlled but honey crops should be increased. We need larger per colony yields to increase profits.

* * * * *

Minor Nectar and Pollen Plants Important It may be difficult at times to account for an unusually high yield of honey from a certain apiary, especially if a much lower per colony yield was occurring the same season in another yard eight or ten miles away. We have had such experiences in our apiaries around Medina as well as in Western Ohio.

It should be possible to make a comparison of apiary locations when all apiaries contain approximately the same number of colonies and all receive identical management and hive manipulation during the season. Usually, but not always, a yard with 60 hives will have a lower per colony yield than a yard with

30 hives. We are now putting fewer hives in each location than we did some years ago.

In seeking a suitable location for an apiary we should investigate the amount of minor nectar and pollen plants available to the bees as well as the major sources of nectar. For example, if there is an abundance of early pollen plants, also minor sources of nectar during the spring months prior to the main flow, colonies are apt to be up to their full strength in time to take full advantage of the major honey flow.

If there is a dearth of nectar prior to the major honey flow, colonies are not likely to be up to full strength and consequently the maximum crop is not secured.

Even though the feeding of a pollen supplement or substitute with sugar syrup is done, these do not take the place of natural bee foods. However, such substitute foods have their place where natural bee foods are lacking.

Beekeepers who have an abundance of nectar and pollen plants within easy flying distance of their apiaries are indeed fortunate. Such plants help materially to increase honey crops.

* * * * *

Condition of Bees Generally Bees in most areas of the North according to recent reports, wintered quite well and are in exceptionally good condition.

Due to the comparatively mild winter in some states, the consumption of stores was rather high and many colonies that were not well supplied with food last fall are on the verge of starvation. It has been necessary to do considerable spring feeding.

It has been said that a severe, snowy winter usually precedes a good honey season. If that holds true this year, we may not expect a bumper crop. However, with an ample supply of moisture, honey plants in good condition, and populous colonies, prospects appear to be favorable for a crop—provided the weatherman is kind to beekeepers.

* * * * *

Multi-Queen Colonies We are coming to believe that there are more two-queen colonies than we perhaps think. This may account for some of the unusually populous colonies we find. We have seen mother and daughter queens laying eggs in the same comb. Some years ago we had a young fellow working with us who found two queens in a hive and he wished to know if he should kill one of them. We told him to leave the queens in the hive and let the bees settle the question as to which of them should be retained.

The late George S. Demuth, former editor of this magazine, had three queens in one hive—mother, daughter, and granddaughter. E. D. Craig, Kentville, N. S., has a short item in "The Beekeeper" published at Durham, N. H., about a multi-queen colony. The following excerpt will be of interest:

"In the early fall of 1938 a colony in the Station apiary provided itself with a young fertile queen, but, contrary to general practice, did not destroy the old queen. On May 12, 1939, the colony was examined. Both queens were found present and laying on the same comb and on the same side of it. Throughout the summer the colony was examined periodically. On August 24, a third queen was found to be laying along with the other two."

* * * * *

Bee Shipments Made in 1951 From a recent report from the U. S. Department of Agriculture, Washington, D. C., it is noted that 712,000 pounds of bees were shipped in 1951, which is 3 percent less than in 1950 and 48 percent below the peak year of 1947.

There were about 290,000 packages of bees shipped in 1951, 46 percent of which moved in 2-pound packages, 45 percent in 3-pound packages, 6 percent in 4-pounds, and 2 percent in 5-pound packages.

An average of 3.8 pounds of bees per colony were shipped in 1951 compared with 5.7 pounds in 1947.

The number of queen bees shipped in 1951 was 696,000 — 3 percent less than in 1950.

Early February reports from shippers indicated that they had orders for about 40 percent of their expected 1952 shipments compared with 29 percent a year earlier.

Canadian beekeepers order mostly 2-pound packages, presumably because the carrying charges are somewhat less and this size package, with good management, is likely to build up in ample time for the main flow—provided the bees are installed reasonably early.

This mild winter in most parts of the North favored good wintering

and would naturally reduce to some extent the demand for packages. However, there are many beginners starting with packages and some commercial men may be enlarging their holdings, especially since the honey price support has risen recently from 9.9 cents to 11.4 cents per pound.

It goes without saying that the package bee and queen business is an extremely important part of our industry and that bee shippers in the South are rendering a worthwhile service.

* * * * *

Maybe we are Partly to Blame Honey, five, ten, or more years old is often found. If it is stored in a proper place where it cannot take on moisture, honey may be said to be a non-perishable food. Sometimes it undergoes a change, frequently getting darker but the flavor is still good.

Granting that a bottle or jar of partially granulated honey is not inviting in appearance and usually does not sell, the "partly turned to sugar" appearance is because the honey has been heated and granulation retarded. It takes a long while for most kinds of heated honey to granulate solid.

To a beekeeper, partially granulated honey is not a problem. He merely places the jar in warm water and if it takes so long to liquefy it that it is a little darker in color, he does not mind. But it is a question whether there ever was a time when a storekeeper would fuss to liquefy honey. Certainly no storekeeper today will do that. Instead, he calls the producer or whoever sold him the honey and demands the unsalable stuff to be taken out of his store—he doesn't want it around. In the end, the hapless beekeeper gets it back and takes his loss.

Honey that has never been heated and that has granulated solid is not uninviting in appearance. The Dyce processed creamy honey sold usually in paraffin tubs, is proof of this fact. Another proof is that in Canada, thousands of tons of honey, granulated solid, are sold in tin pails, the buying public having been educated to accept honey in that form. Children love it that way. They can eat it without getting themselves plastered from chin to toe. Directions are usually included to enable a consumer, if he wants the honey in liquid form to reduce it to that state with little fuss and effort.

Gleanings has pointed out more than once that producers and vendors of honey in the U. S. have trained the buying public wrongly. They have taught it, grocers and retailers that honey is a perishable product, that when it starts to "sugar" it has to be removed. Why ape the syrups? No other sweet is sold in a creamy form like the Dyce and other fine grained granulated honey or even like the naturally hard granulated unheated honey sold in pails. Do we have to admit that the greater portion of common sense in regard to the marketing of honey has been on the north side of the line dividing U. S. from Canada? Thousands of beekeepers have traveled in Canada and have seen the demand for granulated honey. Are we ignorant, stubborn, or just plain stupid?

Fifty years ago, R. C. Aiken developed what came to be known as the Aiken paper bags. Unheated liquid honey was run into the bags where it was allowed to harden. The cost of the package, the cost of the transportation, the danger of breakage, the proportionately lighter weight, were all good arguments. Honey was also sold to a considerable extent in oyster pails. However, these, like the cracker barrel, seem to be disappearing.

Have we not all been guilty, in our eagerness to ape the syrups, of putting out a so-called perishable product, in a heavy expensive glass container inviting breakage and high transportation costs? The honey industry never had a better friend than W. K. Kellogg of Corn Flakes fame. It was Mr. Kellogg's careful opinion over 30 years ago that honey should be more generally sold in the granulated form in order to get it into the hands of the consumer at less cost.

And have we not done the same foolish thing in regard to comb honey? Take 100 children, 75 percent of them prefer comb honey if it is granulated. Why? Because it tastes more like candy, because it doesn't drip, because the wax is less noticeable. Again we ask, who first started the notion that comb-honey had to be new?

We have not paid enough attention to W. K. Kellogg, to our own Dr. Dyce, and to hundreds of others across the border who have pointed to the better way.

From North, East, West, and South

SOUTHERN CALIFORNIA, April 3

Weather: March brought Southern California some bountiful rains. All parts of the country had good downpours with some sections badly flooded. Everyone was jubilant over the copious rains which thoroughly soaked the ground. But toward the end of the month much of the surface moisture disappeared because of warm, dry winds. And at the present writing there is need of more rain. However, the season is getting late and we may not have much, or perhaps no more. There has been plenty of snow on the mountains and that will help with the summer water supply which has been at a very low level for several years.

Condition of Plants: All shrubs and plants are in excellent condition. The heavy rains of the winter and some quite warm days have hastened the new growth. The orange trees look fine and should produce a good flow of nectar next month. Mustard, alfilaria and other small plants are now furnishing pollen for the little busy bees.

Condition of Bees: So far as we can learn the bees are in fine shape. This is the time of year when the condition of the colonies means a fair crop, an average crop, or a bumper crop of honey. The man who has the frames full of brood and prepared to have the colonies ready to boil over with bees at the right time is the one who can expect a bumper crop.

Market: Although this time of year there isn't much activity in the honey market, beekeepers are feeling that the prospects for a good price for their honey this coming season are excellent. The honey markets have strengthened because of the new government regulated prices. The average price per pound having been raised recently to 11.4 cents certainly makes the producers feel optimistic. Whenever any farmer feels that he is to receive a good price for his crops, he works with much more enthusiasm. Beekeepers are no exception.

Miscellaneous: This is the time of year, too, when beekeepers are busy making increase. There are always some colonies to be replaced. Then most apiarists are interested in adding to the number of colonies when conditions are favorable for a good flow of nectar.

But under any circumstances honey producers should occasionally add some new queens and a new strain of bees. It all helps to keep the colonies in good condition so that they will be ready for the first flow of nectar. In these sections the beekeepers want their colonies to be healthy strong ones at the time the orange flow starts. Those are the ones that are able to harvest a big crop of honey.—L. L. Andrews, Corona, California.

NORTHERN CALIFORNIA, Apr. 1

Weather: The precipitation for this area during March was 3.22 inches, bringing the season's total to 19.31 and to 3.30 inches above normal. Several more feet of snow fell in many mountain areas.

The most important weather consideration is the fear of things to come from the unusual snowpack in the mountains where seven times the normal amount of water is now impounded in 12 to 20 feet of snow on the level. The trickle of water from melting snows will soon develop into streams and then into torrents of water cascading down from the heights into the Sacramento and central valleys. Water from the well-filled dams is being released gradually to make room for the floods to come. Recent measurements indicate 48 percent water in the snowpack. This means that 69 inches of water is locked up in the 12-foot snowpack and when one considers that this covers millions of acres of already saturated soil, and that the valley floor is also saturated to a depth of several feet, the dangers of serious flood conditions are in the making. The months of May and June will be critical for the valleys this year, and beekeepers had better get their

hives on land that has not been flooded within the past 50 years. Unfortunately, thousands of homes have been built in the vicinity of cities where water damage has resulted even from heavy rainfall, and where flood conditions will cause havoc to the property.

Condition of Colonies: March was a keen disappointment to the package bee and queen breeders of northern California. Cold, cloudy, and rainy days hindered the pollination of fruit trees and eliminated the early preparation of queen-rearing units for the busy season that began the last week in March. Fortunately, the past week has been favorable for bee flight and queen-rearing operations are now in full swing.

Due to adverse weather conditions, the bees have not been able to make the most of the early bloom from fruit trees, fillerae, mustard, and other plants until just recently. Colonies that were left heavy with stores are now strong in bees, but many are on the verge of starvation. Some colonies have starved. Is there anything more upsetting to a beekeeper than to find a hive full of several pounds of starved bees with frames of dead brood? (Not unless the same colony was found to be infected with American foulbrood!) There seem to be more cases of paralysis this spring than usual, probably increased by the cold, wet conditions. No **Nosema** has shown up in the several samples examined. A liberal application of dusting sulphur, sifted over the tops of the frames of paralytic colonies has brought about definite improvement. The queens of such colonies should be replaced as soon as possible.

Prospects for the Future: Heavy rains have promoted plant growth and improved plant conditions in all areas to a point where, with suitable weather conditions, beekeepers have a right to expect a better than usual nectar flow from a wide variety of plants. The heavy snowpack of last year and the present season will make conditions more favorable for mountain flora. Flood conditions will spread many seeds over vast areas and the water soaked soils will produce strong plants which will remain in good condition over a longer period. These factors will enable the beekeepers to increase their colonies for pollination purposes and possibly secure some surplus even in the crowded areas. Fall flowers should appear in greater abundance to provide winter stores after the pollination period has passed. This outlook is months ahead of the present season, and many things can happen before the honey is in the can or before the seed is harvested. It does seem like one of those years in which every beekeeper should fill up all of his equipment, have all of his supers ready, and get every colony in shape **for** the season, whether it is for pollination or for honey production. The increased prospects for a better than average honey flow and the increased subsidy on honey may cause many beekeepers to divide their colonies between honey production and pollination services in order not to have all of their eggs in one basket.

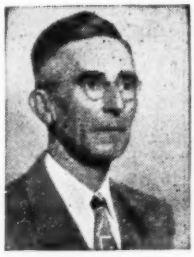
The Honey Market: As far as the producer is concerned, he will have to look to the future for honey to sell for most of the honey has moved out of the producers' hands. In fact, the handlers have had such a good season supplying their export, school lunch, and domestic markets that the carry-over into the coming season will be extremely light, if any. If the new California Honey Marketing Order can increase the consumption of honey in this state by as little as one-half pound per capita, some of the handlers will have to either handle more honey or revise their allotments for California distribution.

The increased subsidy from 10.1 to 11.4 and the assessment and cost of collection thereof under the Honey Marketing Order may necessitate an increase in the retail price of approximately two cents per pound. This increase is due, however, in most of our markets because the present price of honey is generally below that of several years ago when the producer was receiving 12 cents per pound for all types of honey and wages were somewhat lower. Retail honey prices have not kept pace with the general price index.

Miscellaneous: We have received several samples of dead bees from different parts of the state for examination as to the cause of death. No Nosema has been evident in any of these samples. Chemical analysis by the Division of Chemistry, State Department of Agriculture, has revealed the presence of parathion

in some samples, but most have contained arsenic trioxide, in some cases as high as 17 parts per million. Several hundred colonies were involved in a combination of parathion and arsenical poisoning in San Bernardino County. The arsenicals were used for peach twig borer on almonds and peaches. Wherever the beekeeper suspects chemical poisoning, he should contact his Agricultural Commissioner and Farm Advisor **immediately** and have each investigate the probable cause of the injury. Hives should be moved from the almond and peach areas before these sprays are applied in order to avoid chemical injury.—J. E. Eckert, University of California, Davis.

TEXAS, April 4



Weather: Although our past winter was comparatively mild, the cold season was in reality rather prolonged. The unseasonably early fall frost in early November and spring frost the last week in March caused considerable damage of tender growth of wild and cultivated plants and fruit bloom. Rainfall over Texas generally did not approach the normal amount; however, more sections experienced relief from drouth.

Bees and Plants: In east Texas bees are generally in good condition with most colonies approaching the peak of brood rearing and some hives making preparations to swarm. Wild flowers are abundant and pollen has been gathered in abundance. Recent frost caused some plant injury and delayed the nectar flow. Yaupon is beginning to bloom and incoming nectar from this source indicates that a flow is in progress. In south Texas conditions are variable with some loss of colonies reported from prolonged scarcity of pollen. Plant conditions too are spotted. Some bloom was reported from mesquite and guajillo but a general bloom is not in prospect. Both plants suffered considerable frost injury. Recent rain throughout that area is bringing plants back to normal condition. Some beekeepers in that section who usually migrate will remain in brush locations this year with the prospect that guayacan, catsclaw, and later mesquite will yield a normal honey crop. Throughout most of the blackland area where intensive cultivation is the rule, bee pasture of native plants is limited to roadside and water courses. Here spring build-up of colonies is a difficult problem. Beekeepers are solving this problem either by feeding pollen substitute or moving the yards to better bee pasture for the spring and later returning to the blackland for the summer for the main honey crop of sweet clover and cotton. In central Texas, sweet clover plants are reported in good condition. In northeast Texas a record acreage of vetch is in excellent condition with a good flow from this source expected in the near future.

Miscellaneous: Queen breeders have experienced good demand for queen bees with shipments going out since the middle of March. Package bee shipment is now in progress.

The Kaufman County Beekeepers' Association held a joint meeting with vetch seed growers on March 21 at Terrell. These two organizations have shown excellent cooperation and as a result thousands of colonies of bees have been moved to the vetch fields. In driving through that area one can see from the highway miles of vetch fields with apiaries well distributed along the fields.

The San Antonio District Beekeepers held their early spring meeting at San Antonio, on March 28. H. H. Root was the guest speaker. —A. H. Alex, College Station, Texas.

COLORADO, March 20

Weather: This is being written on the official first day of spring. It is snowing. It snowed yesterday, and it is hard to remember when last it did not snow. The big question in this country is MOISTURE. That question is answered for 1952. It cannot help but be a "wet" year. Now the minor questions take over. Are we going to have enough warm days for bees to build up before the hon-

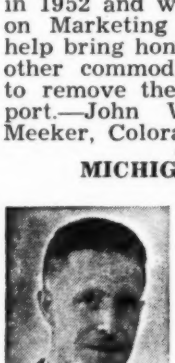
ey flow begins? Are we going to have excessive winds that will dry out the surface moisture before irrigation starts, and thus curtail the early flow from dandelions and other minor sources? And most vital right now—are we soon going to get a day warm enough for bees to have a good flight so that they may clean their alimentary tracts and begin the cleaning of their hives? It is time, too, for them to expand the limited brood nests that they have been maintaining during all this refrigeration. The best policy seems to be: Be prepared for and expect the worst, but never fail to be ready for the best also; it just might happen some day.

Condition of Bees: Colony condition is so closely tied in with weather that one might guess after reading the first paragraph that bees are not in the best of condition. There has not yet been a general cleansing flight. This is far from what we ordinarily expect in Colorado where many winter days are usually warm and sunny. Where colonies were small and stores were poor, containing late-gathered honey dew, it looks like a safe bet that many colonies are going to be very poor or out of the picture altogether. On the other hand, colonies with large clusters are normal in all respects. It is truly wonderful to see some of the colonies that we have been digging out of the drifts recently. One can accurately gauge the size of the colony by the size of the air space around the hive. The large ones have the snow melted away from the outside of the hive from six to nine inches, while the weak ones may have only a two or three inch air space.

Market: The market for honey in bulk and in retail packages seems to be better. We have had several inquiries of late for honey in large lots, but have been cleaned out for some time. Considerable credit for this condition must go to the Government program which took several carloads of honey out of this area last fall. Beekeepers needed ready cash, and the government program offered them the opportunity to cash in. It may do the retail market harm in some sections for they are apt to be bare of honey or prices excessive before the new crop comes on. But in an area such as this where a large part of the crop is exported out of the state, the program has helped immensely.

The Colorado Honey Marketing Order can claim some of the credit, too, especially for the improved condition of the retail markets in our own and adjoining states where Colorado packers have distribution. The Administrative Committee has budgeted more funds for advertising in 1952 and will spend some funds on Marketing Research, hoping to help bring honey prices in line with other commodities, and eventually to remove the need for price support.—John W. Holzberlein, Jr., Meeker, Colorado.

MICHIGAN, March 26



Condition of Bees: Reports of beekeepers from all over Michigan indicate that bees have wintered very successfully. George Lengst of Tuscola, keeps a colony of bees on scales all year round. This year the scale colony lost 40 pounds between October 10 and March 20. Mr. Lengst says that this loss is heavier than usual and most beekeepers report heavy consumption of stores.

Marketing: Most of the honey is out of the hands of the beekeeper at this date. Some commercial beekeepers make a practice of holding bulk honey providing they can make it safe from fermentation. If honey can be heated to destroy fermentation yeasts at the time of extracting, the beekeeper does not have to be so rushed about getting it off his hands in the spring.

Prices have been steady or advancing very slightly. Many beekeepers claim their intuition tells them that beekeeping will be somewhat more prosperous for a while. Bargains in used equipment are not as easily available as they have been. Most things move in cycles and it is time that the bee business began to pick up. I certainly hope that this feeling of optimism is justified.

In early February, Mr. Howard Schmidt, Mr. Oscar Schmidt, and I were asked to visit the local Production and Marketing Administration Office in Lansing. We were asked many questions with regard to honey production, storage, and marketing in Michigan. The questions indicate that a study is being

made of complying with the industry's request and revising the method of price support. If the new system of price support comes into effect beekeepers will be able to borrow money on honey, from the government in the fall. They will then be tided over financially during the fall months and will be able to sell on the most favorable market before the time comes to settle up with the government.

Two thoughts strike me in connection with this program. First, if the plan does come into effect and the price of honey increases somewhat during the coming season, there will be more need than ever for proper merchandising, advertising, and general honey promotion. It should be kept in mind that a higher price is only one side of the picture. The other side is that domestic and export consumption must equal production. It is quite within the realm of possibility that government action will increase the price of honey. It is then up to the industry to see that the public is kept sufficiently honey conscious to eat all honey available at the increased price. Every beekeeper in the country has enough imagination to carry out some honey promotional campaign in his own community this season, even if it is only putting a honey sign on the car license; or painting an attractive sign for the truck; or sending out post cards to friends and neighbors announcing the arrival of your new honey crop.

The second thought in connection with a government loan system for honey is that beekeepers may store honey for longer periods of time in the spring and become confronted with more fermentation problems. This may speed up the day when more beekeepers will use drying rooms in their honey houses in order to remove moisture from honey while still in the comb. Removal of moisture from honey lessens the danger of fermentation and drying rooms have been proven to be very practical by many beekeepers.

Meetings: In accordance with the usual procedure, the Michigan Beekeepers' Association held a business meeting in December and a two-day educational meeting during Farmers' Week at the end of January. Members who did not attend missed some good meetings. Mr. Carl Killion, as visiting speaker to the Farmers' Week did an outstanding job in explaining the intricacies of comb honey production and marketing. He showed movies and slides and gave two talks on the subject. All the beekeepers attending the meeting enjoyed his presentation very much. Arthur Kehl came in from Wisconsin to give us another good talk on marketing. This time he explained the functions of the different agencies in normal channels of trade. He pointed out that beekeepers should charge the right price in the right place and not be guilty of disrupting the market by charging the same price to packer, wholesaler, retailer, and consumer.

I had the pleasure this year of being invited to the New Jersey Beekeepers' Association meeting at Trenton, N. J., to take part on their program. They had a good meeting with active participation by the members. As is usual in this beekeeping fraternity of ours it took about ten minutes to become acquainted and feel right at home with this group. It always surprises me to find very similar types and personalities at bee meetings regardless of the location. Generally there is an overworked secretary who is often criticized and rarely thanked; the apiary inspector; someone from the college; two or three representatives of supply companies; someone who is very anxious to promote bigger and better schemes; someone who is "agin" all of them; an old timer who always tells how the same thing was done much better back in 1913; often much aggravating discussion of a contentious resolution, but generally a very sane final decision.

County Association meetings have been taking place in Michigan during the last two months. Attendance is generally small varying from eight to forty. Last week Don Barrett and I attended meetings in the thumb area of Michigan. In Huron County the county agent called two meetings for farmers interested in seed growing. Attendance at one of these was 250 and at the other was 65. A year ago a similar meeting was held with an attendance of 280. The crowd was larger because these were declared regular meetings of the Farmer Veterans. However, this presented an excellent opportunity to instruct large groups in the importance of pollination. The groups showed a great deal of interest.—E. C. Martin, East Lansing, Michigan.

ONTARIO, April 9, 1952

Weather: The poets may write feelingly about "winter lingering in the lap of spring", but we here in Ontario would prefer that winter vacate the scene, and betake himself to where, paradoxically speaking, winter spends the summer. After dominating the scene for five months he has at last succumbed to the warm south breezes and April showers. The weather during the winter was fairly normal, slightly colder than average according to the weather man, but there were no prolonged cold dips, such as we sometimes experience, when the mercury will stay below the zero mark for several days. We also had numerous mild spells with the temperatures in the 40's. The snowfall was fairly heavy, but due to the mild spells as mentioned, there never was more than 18 or 20 inches covering the ground here in Central Ontario, and at this date only traces remain in sheltered places, and the bees are flying in the warm sunshine.

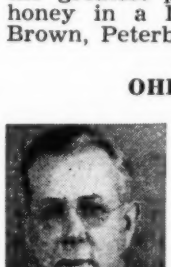
Conditions: No pollen or nectar have been gathered from natural sources as yet. Our first minor sources are the soft maples and willow. Last year bees gathered pollen from the maples on April 7th, and as it will be at least a week before blooms open we may consider the season about ten days late.

I visited two or three yards this week, and found a few colonies dead from various causes, principally mice, which were very numerous last fall. Some of these, apparently more determined than the others, will gnaw right into a hive, and generally result in the death of the colony. Stores are not plentiful, and this seems to be a general condition, as the Apiculture Department at Ontario Agricultural College recently circularized the province's beekeepers calling attention to this condition, and urging emergency feeding to save starving colonies.

Honey sales which have been draggy during the winter have improved considerably and sales are reported as steady, if not brisk. Persistent promotional work by the Canadian Beekeepers' Council and the various provincial associations is steadily increasing consumption.

Miscellaneous: Before these notes appear in print the National Hockey League play-off for the Stanley Cup will be history, and this series has especial interest for beekeepers because the Detroit Red Wings who are in the finals against Montreal Canadians, used honey as part of their training diet. If the Red Wings win the series, and on their showing during the regular schedule, they appear powerful enough to do so, the Ontario Beekeepers' Association are considering using space to advertise the fact in a number of the province's largest dailies. It will be the greatest promotional boost for honey in a lifetime. — Allan T. Brown, Peterborough, Ontario.

OHIO, April 1



Weather: Since my last report we have had quite a variation in weather. During this time we have had sufficient "Jupiter Pluvius" to give all plants an excellent start for spring. All beekeepers, farmers, and others, welcome this fact. In Ohio there have been no storms comparable with some in other states, especially those to the south and southwest. We have, however, had sufficient continuous rains to create disastrous flood conditions. There has been damage but, fortunately, no hurricanes nor tornadoes.

Bees: In all cold climates there is that feeling of uncertainty prevailing among beekeepers. In the December issue of this magazine I reported that bees went into winter in excellent condition. In early January there was an unusual amount of brood rearing and it continued through February and March. At this writing there are more young, vigorous bees per colony than for many years past. Where an abundance of honey and pollen existed last fall there is no cause for alarm. An early spring will be a great asset to beekeepers. At this time all colonies will require your close attention and some will need feed and pollen supplement. With the high cost of bees and queens along with the unreasonably

high cost of express it will be profitable to give close attention to each colony. To lose a colony now will mean a reduced income—percentage wise—when your crop is harvested. New queens from the South have already arrived and are being installed. Many colonies are sufficiently strong to make your own increase with only the expense of a queen.

Clovers: Early last fall young clover did not look too promising, due of course, to continuous dry weather. Then came the rain and at times much faster than the soil could absorb it. Now the fields of clover are in good condition, except in a few localities where "heaving" caused by freezing and thawing have exposed so much root surface it will delay the growth. In some parts of Ohio, reports have come to me that soft maple bloom has been frozen. This is one of our earliest sources of pollen and nectar. Elm is another source of early pollen but the Dutch elm disease and **phloem necrosis** have caused them to almost disappear in many sections of Ohio and other states.

Honey: Prices are quoted monthly in all bee magazines. Very little honey is now in the hands of the producer.

Miscellaneous: New maple syrup is on the market at $6.00 per gallon and people are buying it, too. By way of comparison, extracted honey is about $3.00 per gallon—by the pound jar. Comb honey compares more favorably. The average weight of comb honey per section is 12 ounces and it requires 16 sections to make a gallon. It is now retailing for 45 cents and 50 cents per section. At the former price honey brings $7.20 per gallon and the latter $8.00 per gallon. If we average the three separate prices for honey the average is approximately $6.00 per gallon. Again by comparison, maple syrup, when reduced to sugar, contains 83 percent carbohydrates, 16 percent moisture and 1 percent ash. Honey contains 81 percent carbohydrates, 18 percent moisture and 1 percent protein and ash.

There are nearly 100 varieties of maple trees in the north temperate regions of the world. Maple trees are nearly always an asset to beekeepers whether he taps them at the base or his bees tap them at the blossoms at the top.

Honey took the place of sugar in the early days of the ancient Greeks and Romans. Yes, honey was the first known sweet but with too many people now it is about the last known sweet.

Vermont and New York are the leading states in the production of maple syrup and Ohio is a close third.

In closing, may I offer these suggestions: "A future crop of honey usually belongs to those who prepare for it." "In a beehive, never accept the negative until you have explored the positive."

Both of these above can and should be applied to many other endeavors.—W. A. Coulter, Columbus, Ohio.

MAINE, April 10

Weather: The winter that has just passed has been unusual in many ways. The first part was mild with a small amount of snow and a heavy rainfall. During the week of February 16 we had our storm of storms which dropped three feet of snow in this section of Maine. It was a common sight to see snow drifts ten feet high. The snow was very wet and the wind packed it enough so one could walk over the drifts without sinking through.

So far the snow has melted by the sun. This gradual melting has prevented heavy spring floods and runoff and is holding the water for the summer season.

Bees: Bees have apparently wintered well with some colonies, as usual, needing feed. At this time the weather is too cold to examine them and give a satisfactory report. However, beekeepers are preparing pollen substitute and feeder cans for early spring boosting of the brood nest.

Honey Market: Honey has had a steady demand through the winter months. At this time maple syrup is a strong competitor. This is a condition we have every spring until the maple syrup has passed on. The price of Maine honey extracted is 35c a pound retail with comb honey 50c a pound. The so-called blended honey that one sees on the super market shelves runs a poor second when the consumer can buy direct from the local beekeeper a honey with a true honey flavor.

Miscellaneous: Progress has been made in the inspection of foulbrood during the past year. In a recent

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report by the state inspector the areas inspected and rechecked showed that foulbrood had been greatly reduced. The inspection work this year will be done in the same manner as in the past—that is, working from the worst areas as reported to the Horticultural Dept. in Augusta.

At the annual meeting of the Maine State Association of Beekeepers at Farm and Home Week in Orono, the following officers were elected: Pres. Walter Gerald, Portland; Vice Pres. L. J. Devoe, Houlton; Sec. William C. Grindel, Lamoine; Treas. C. A. Stanhope, Bradford; Librarian J. P. Wiggins, Portland.—Edward M. Wills, Kent's Hill, Maine.

Passing of W. Leroy Bell

By Richard E. Bell

W. Leroy Bell

W. Leroy Bell, 54, died at the Community Hospital, Santa Ana, California, March 2, 1952, of coronary thrombosis.

Mr. Bell, or Roy, as he preferred it, had been active in California beekeeping for 30 years, residing in Orange, California, for the bulk of that period. He is survived by his wife, Clara, two married sons, three grandchildren, and two brothers.

To write about Roy Bell is to write of a life full of color. His early life was spent in the Territory of Arizona, where he was born in 1897. Prior to World War 1, Roy operated a cattle ranch, farmed in the Verde Valley, and was a forest ranger near Flagstaff. Following a hitch in the Infantry, including six months in France, Roy returned to the Verde, married a school teacher from California, Clara Gilbert, and once more became a rancher.

Nineteen twenty-two was the beginning of Roy's work with bees when he and his father both moved to California and founded the Bell Apiaries at Orange, California. The ensuing 30 years saw the small beginning of this venture grow to a bee outfit numbering 2000 producing colonies and an equal number of queen nuclei.

Roy was resourceful and creative. He revived the long-idea hive and modified it, calling it the Bell-Duo Hive. With a few of these double hives he produced such a fantastic amount of honey one season that it was years before he wrote a report of the experiment. He feared disbelief of beekeepers and dreaded misleading the novice.

The Bell Caucasian queens became known in many parts of the world, with shipments to the Orient, Mexico, and South America not uncommon during the course of a season. Many leading beekeepers all over the United States depended on Roy Bell for their queens.

Roy was a past president of the California Beekeepers' Association, an organizer of a cooperative bee venture in Southern California, and a tireless worker in furthering the interests of the industry.

Roy was a man of many interests, and while he spent long hours with the bees, he always found time to pursue one or several of his other activities, such as collecting and polishing semi-precious stones, delivering speeches on fishing, philosophy, or bees, to civic groups, free lance fiction writing, elk hunting, or just enjoying conversation with his family or friends.

As his many acquaintances will remember him, he was a man with time to help when help was needed, a friendly man with a ready smile. His place will be hard to fill in the councils of California beekeeping, but the memory of his genial and helpful personality will live long in the minds and hearts of his friends.

American Honey Institute News Notes

By Harriett M. Grace, Director

Most of you have taken tours through large lumber mills or steel plants or automobile factories. The sight is awesome because of its hugeness. Especially impressive is the production line, where row after row of machines stretch for what seem like miles on end.

And around these machines clamour the factory machinists, the men who turn just the right switch at just the right time, apply just the right amount of oil, know just the right trick to repair a machine.

They are perfectionists in their jobs. They know their machines as well as they know themselves. With such intimacy comes the real understanding of their machines that makes them the competent workmen they are.

But also with this intimacy comes a shortsightedness of what the complete operation is all about. How can they know the problems of the office worker, of the sales department, of the adjustment and repair crew? They have neither the time nor the opportunity to acquaint themselves with all of this.

So large industry sets up a system of management, a set of officers who view the industry through farsighted lenses to try to get a fair and total picture.

But the beekeeper has loaded himself down with **both** of these responsibilities.

He must know the best, most sanitary methods of producing honey. He must know his bees, their source of nectar supply, the capacity for producing honey.

But he must also know the correct way of managing his small business. He is head of the sales department, chief of the complaint department, and president of the board of directors. He not only runs a small industry; he **is** the small industry.

Sometimes beekeepers, like all human beings, become too absorbed in their own work to look up to see what's going on. They sometimes neglect to replace their nearsighted glasses with farsighted ones.

But a look at the long range aspect of honey production and sales is most important. It is most prudent for a beekeeper to plan his future, how he might expand, how he might increase his sales. It is wise for him to take time to analyze his present markets, to find out how they could be made more profitable to him. He should hark to the direct complaints of customers or the more indirect complaint of customer resistance, for it tells him exactly what he should correct to take the kinks out of his business.

He should keep abreast with newest and latest sales methods, learn about good packaging, effective displays, wise advertising. He must realize that his honey competes with every other product in the store, and as such must be able to compete **effectively** with them.

The whole structure of the American Honey Institute was erected on the supposition that the beekeeper wanted to draw his industry out of the "small peanuts" class and make it into a profitable, good-sized industry. For "promotion", the Institute's password, presupposes a concern for the welfare of your product when it is dumped into the market place and left to swim on its own. Promotion is carried on by far-sighted people who know that most sales are preconceived by the customer — that is, he already has the **desire** for a product before he buys it.

And promotion is the only effective way the producer has to create that desire in the minds of the public.

Honey producers were way ahead of many industries in setting up an Institute for the express purpose of promoting honey. They still are ahead.

The honey industry as a whole is thriving because most individual beekeepers have adjusted their sights into the future. They see that there is now, and always will be, a crying need for the producer to acquaint the customer with his product **before** the sale will be made. This means good displays, good broadcasting of information about honey.

Every beekeeper knows what the Institute is doing every day in this direction — he knows about the tested honey recipes, the radio and newspaper releases, the television programs, the allied food promotion of honey.

(Continued on page 303)

Asked & Answered

Sulfathiazole for Controlling AFB

Question: Some beekeepers told me that there is a drug that can be used to cure American foulbrood. Is this a fact? —Everett Beckett, Ky.

Answer: There is a drug called sulfathiazole that has been used by some beekeepers for controlling American foulbrood. Please note that we say, **"controlling"** and not **"curing"**. Sulfathiazole does inhibit or hold up the progress of the disease but does not destroy the organism Bacillus larva which causes AFB. A few beekeepers, however, claim that they have cured the disease with sulfathiazole. It would appear that further scientific experimental work needs to be done to determine exactly how effective this drug really is in controlling AFB. To use the drug, you should purchase it in ½ gram tablets and dissolve one of these in a cup of hot water, then mix this into a gallon of hot sugar syrup made of equal parts of granulated sugar and water. It may be necessary to feed this to a diseased colony more than once.

Removing Dead Bees from Combs

Question: Last winter one of my colonies died from lack of food. Today I opened it up and cleaned the combs out. This proved quite a job as about 50 percent of the cells had bees lodged completely in them. I tried to jar them loose; but this proved inadequate as the combs tended to crumble and break. I then tried dislodging them one at a time by pulling them out with my fingers; this, however, was very slow. Is it necessary to do this before using them again and if it isn't, is there a better method? Also there were small patches of greyish white mold on the combs. Is this harmful?—Gary A. Burginyon, Wash.

Answer: It is difficult to remove dead bees from the cells of the combs occupying hives in which colonies have died during the winter. When the dead bees become dried up, which they will when the weather gets warm, some bees can be jarred out of the combs. We have found, however, that when a package of bees is installed in a hive containing combs with some dead bees, the package bees will remove all of the dead bees in a comparatively short time. They will also clean up the moldy combs.

Birdsfoot Trefoil as a Honey Plant

Question: Is birdsfoot trefoil a good honey producing plant and how old does it have to be to produce honey? A friend of mine planted 70 acres of it last spring. It will be one year old this spring and he has a very good stand of it. I told him that I wanted to take some of my bees out there and he told me to go ahead.—C. S. Trowbridge, N. Y.

Answer: We are sorry that there is not enough known about Birdsfoot Trefoil. In parts of your state bees are said to work on it very well, and is considered a good honey plant in Europe. It is probable that some of the honey sold as clover comes from trefoil, for trefoil pollen has been found in the so-called clover honey. While comparatively little is known of the possibilities of trefoil as a commercial honey plant in this country, it would seem that it would pay to put 25 or 30 colonies on this 70 acres, especially if there is considerable basswood in the vicinity. Of course, basswood does not yield every year and you might be disappointed in that source.

Manipulation of Food Chamber

Question: Should the queen excluder be put upon the brood chamber, and when? Our winters on Long Island are quite mild and I am wintering the bees unpacked in one deep super brood chamber and one shallow super food chamber. Recently I read that the queen should be confined in the brood chamber.—Erid Kopp, N. Y.

Answer: When we first began using the shallow food chamber, we permitted the queen to have access to the combs of the food chamber and the brood chamber proper during the spring months. It was usually necessary to add an extracting super during fruit bloom and dandelion time to make room for incoming nectar, also for brood rearing. When the main honey flow started, we put the queen down into the lower brood chamber below a queen excluder and added supers above the excluder, keeping the shallow food chamber on top during the entire season. This necessitated considerable lifting as additional supers were needed. However, it did result in having the shallow food chamber crammed full of honey at the close of the season. When colonies went into winter quarters late in the fall, the queen excluder was removed and the shallow food chamber rested on top of the brood chamber. There was a considerable amount of honey in the brood chamber below and this, together with the honey in the shallow food chamber, usually was sufficient food for winter and early spring

requirements. At present we are using the deep food chamber. In this locality, we have found that by using the queen excluder on top of the double brood chamber or what is called the food-chamber hive, the bees will have these two chambers well filled with honey at the close of the season, especially in an area where there is a late fall honey flow. We believe it is good practice, however, to confine the queen down to the bottom chamber during the late summer and fall months in areas where there is little, if any, surplus gathered in the fall.

Getting Liquid Honey Without an Extractor

Question: As the owner of only one hive, I would like to know how best to extract the honey. I like the pure honey for eating without any of the comb. Most extractors and capping knives are entirely too expensive for so small an operation. —Miss Lady Major, So. Car.

Answer: As you have only one hive of bees and wish to get some honey without any comb in it (which we call strained or extracted honey) this may be secured by cutting the combs out of the frames into a large sugar sack. When the combs are all in the sack, the mouth of the sack should be tied with a piece of twine and the sack hung in a hot room over a large pan or kettle. The combs in the sack may be crushed with the hands in order to squeeze the honey from them. The honey will strain out through the meshes of the sack and the comb will be retained in the sack. You then have the honey separated from the comb, as well as the comb which when rendered into wax has considerable value.

What to Do with Combs Containing Granulated Honey

Question: I have a chance to buy six hives of bees, an extractor, and extra supers and frames. All of this is in good condition. The hives have two and three deep supers not including the brood nest. They are full of honey that was not taken off last fall. Now if I buy them what can I do with this honey that is four or five months old?—John E. Donley, Ohio

Answer: Probably the honey in the supers still on the hives is partially granulated by now. This will make it difficult to extract or get it out of the combs. A portion of the honey might be thrown out of the combs by an extractor if the work is done in a warm room and the honey stored in the room for a time before extracting, in order to heat it. When honey is granulated solid in combs there is not much you can do to get the honey out. If you plan to increase the size of your apiary in the near future, you might buy package bees and use this honey for food in hives intended for the packages. About four combs of honey for each package would provide an ample amount of stores, for a time at least. It would do no harm to give more than four combs to each package. The amount they would need would depend somewhat upon the nature of the honey flow during the spring months. If you do not wish to use this honey as food for packages, one more method we can think of to dispose of the honey, or rather, to get it out of the combs, would be to cut the combs into a metal container or some 60-lb. honey cans with the tops cut out. These cans containing the combs of honey could then be put into a wash boiler containing water, over a hot plate. When the water is hot the combs would then liquefy, and the honey as well as the wax would melt. The water should then be allowed to cool. The wax being lighter than the honey will solidify on the surface and the honey remain below. The chunk of wax could then be lifted off and the honey could be reheated and strained through fine cheesecloth to remove any bits of foreign matter. You then have the wax separated from the honey. Of course you would have to put fresh, full sheets of foundation into your frames but this could be done.

Sterilizing Honey Extractor

Question: Is there any way to sterilize a honey extractor that has had foulbrood combs in it? I am having my doubts. If you know of a way, will you kindly advise me?—M. E. Ballard, N. Y.

Answer: The only way we know of to sterilize a honey extractor which has had foul brood combs in it is to wash or scald the inside of it with hot water until every trace of honey and wax has been removed. As you know, it is the honey that has come in contact with the diseased organisms that carries the infection. If all of the honey is removed from the extractor, it cannot carry disease. Another possible way to thoroughly clean the extractor would be to cover the top of it with heavy burlap sacks or blankets, then run a hose of live steam into the extractor allowing the steam to find its way out through the burlap on top.

Australian Beekeeper Becomes World Traveler

By Alan M. Frost, Colton, California

Following the recent International Beekeepers' Congress, held in Leamington, September last, an Australian apiarist had the good fortune to be able to act as chauffeur to several American bee folk. The new Austins, miles per gallon, and insistence in driving on correct side of road, had latter visitors amazed and startled, during their English tour. To foster goodwill between nations and to make a long story longer, the Aussie was invited to visit the U. S. and look over this bee country.

Thanks to Woodrow Miller and Harry Whitcombe kindly offering to act as sponsor, a five-month visitor's visa was permitted. Arriving in New York, the Hudson greeted the writer with inches of ice. This however, was nothing new, following the English winter.

Two of the Austin tourers, the Stephens of Raleigh, warmly welcomed the visitor and several interesting days were spent looking at beekeeping in North Carolina. As much of this state's honey crop comes from trees, it somewhat resembled Victoria in this respect.

Calling on several prominent apiarists in the South and learning many interesting things, I then proceeded to Baton Rouge, La., where the friendly helpful research team outlined their present investigations.

On through Texas I thoroughly enjoyed a real wild western Rodeo at San Antonio. Felt sorry to have just missed the important nationa

M. Frost standing by an English honey sign.

Mr. Frost and his passengers while touring England. Left to right: Mr. and Mrs. Stephen, Mr. Frost, Dr. Astrid Loken, of Norway, Mr. Frank Todd, U.S. Bureau of Ent.

meeting at Dallas.

Arrived in Tuscon and immediately by consternation showing on Frank Todd's and fellow research worker MacGregor's faces, was aware that a big project confronted these scientists. Only by chance I overheard a whispered conversation giving a lead, as Todd, in dismay said, "We will have to teach this guy to speak English".

What immense and highly successful projects are the Salt River, Gila, Colorado and Yuma irrigation systems. To see such a wealth of green in this low rainfall area is to be marvelled at—from worthless desert to highly productive agricultural land, a fine achievement, and surely a lesson to what could be done in Australia. Many beekeepers and farmers visited were widely awake to the value of our friend the honey bee, playing an important role in these vast food producing regions.

It seems apparent that the apiarists of the United States are indeed fortunate in having such a comprehensive program in the field of research carried out by experienced men and looking into many of the beekeepers' worries. Thanks to these research fellows and mostly through their efforts in the field of pollination, the standing of the American beekeeper has risen to a new high in the Nation's economy.

Tests recently carried out in Arizona, proving the value of bees in melon growing, are worth a fortune to the industry. Through publication, the public, as well as farmers, are rapidly learning that the oft mistreated beekeeper is now a valuable asset in food production. This will no doubt also lead to an increase in honey sales.

During past 12 months the writer has travelled some 40,000 miles and visited 21 different countries and in looking into honey sales, new uses for honey, etc., one thing stands out, that whenever science looks into food, it is pointed out that natural foods are best, and honey is a natural.

Assisted by eucalyptus, California so far reminds me most of our far south eastern state, Victoria.

Many thanks to all my new found friends for their grand help. Should any apiarist wish to visit Victoria in the future I shall be pleased to help in any way.

(Continued from page 299)

But what Mr. Beekeeper doesn't realize is that most other beekeepers also engage in their own little **local program of honey promotion.**

And this is most important. It shows the beekeeper is able to assume the two-fold responsibility (that of production plus management) readily.

It is the signpost pointing to a profitable business.

Many a beekeeper wants to advertise in his local paper but puzzles over exactly what he should say and how he should say it. Remember these few points when writing out your ads and you can't go wrong:

1. Keep the number of words in your ad to a bare minimum. Too much said in an ad is almost as bad as not advertising at all. No busy newspaper reader (who, by the way, spends an average of only 15 minutes a day reading his paper) will take the trouble to read a lot of copy. Besides, the more white space you have around the printing the more attention your ad will attract. By all means don't try to fill up the total amount of space you buy with words!

2. Use small graphic words. Keep the long three-syllable words to yourself. The newspaper reader scans when he reads, and short words are more easily caught than long ones.

3. Paragraph often. Don't put more than two sentences in a paragraph. And no more than eleven words to a sentence, please!

4. Ask the ad taker to set the ad up with different kinds of type; that is, some words might be in bold face, others in italics.

5. Never try to tell the whole story of honey in one small ad. Instead, make only one or two points per ad. You might vary each ad with a different informative fact about honey. But remember, for best results, keep the same format or design to each ad so you can drum your name, name of your product, and your address home to the public.

If you do not wish to draw up your own ads, send for the newspaper advertising mats the Institute offers to sell at cost. This will save you much trouble and also assure you of a well set-up ad.

Just News

The Westchester County Beekeepers' Association will hold its regular monthly meeting at 2:30 P. M. on Sunday, May 18, at the Odd Fellows Hall, 20 Lockwood Ave., New Rochelle, N. Y. R. B. Willson who travels to Mexico, South America, and Europe buying honey will be our guest speaker. He will tell us of some of his experiences on these trips. Refreshments will be served, and visitors are always welcome. —Carlton E. Slater, Publicity.

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The Middlesex County Beekeepers' Association (Mass.) will open their outdoor activities on May 24th at the home and apiaries of Mrs. S. S. Fitzgerald, 62 South Ave., Weston, Mass. at 2 P. M. The progress of the Club Hive for one month will be noted by members and this hive will be moved to each succeeding location of the monthly meetings until the September meeting when some fortunate member will be presented with the hive.—John H. Furber, Sec.-Treas.

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The St. Clair Beekeepers' Association will meet in the County Highway Bldg., at Belleville, Illinois, the evening of May 7, at which time plans will be made for the southern zone meeting to be held June 1.

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The Alexander Co., of Toledo, Ohio, have discontinued the sale of bee supplies, and will devote their entire time and facilities to the processing and packing of bulk and bottled honey.

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Short Course for Beekeepers
Ames, Iowa, May 13-14, 1952
Memorial Union, Room 206

Tuesday, May 13

9:30 - Registration
Bee Activity — F. B. Paddock, Discussion Leader
10:00 - Inside the Hive—Dr. O. W. Park, Ames.
10:30 - Outside the Hive — G. H. Cale, American Bee Journal, Hamilton, Ill.
11:00 - Pollination — R. J. Walstrom, Ames
Spring Management — G. H. Cale, Discussion Leader
1:30 - Wintered Colonies — Henry A. Schaffer, Osseo, Wis.
2:15 - Package Colonies — Henry W. Hansen, Dakota City
2:30 - Wintered Colonies — John G. Jessup, Perry.
2:45 - Discussion — Everybody.
4:00 - Open House — College Apiary
7:30 - Science Building, Room 308.
Frank L. Swanson, Council Bluffs, Presiding
Movie — Canadian Hunting Trip — Henry A. Schaffer

Wednesday, May 14

Summer Management — John Jessup, Discussion Leader
10:00 - Extracted Honey — H. A. Schaffer
10:45 - Bulk Comb Honey — Newman I. Lyle, Sheldon.
11:00 - Extracted Honey — L. D. Taylor, Harlan.
Fall Management — R. J. Walstrom, Discussion Leader
1:30 - Colony Adjustment — Henry A. Schaffer, Osseo, Wis.
2:15 - Late Summer Adjustment — Loyd Stanley, Gilbert.
2:30 - Putting into Winter — G. H. Cale, Hamilton, Illinois.

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Tenth Annual
Beekeepers' Short Course
May 7, 8, 9, 1952
University Farm, St. Paul 1, Minn.

Wednesday, May 7

8:00 A. M. Registration
9:15 A. M. The life story of the bee. —M. H. Haydak
10:00 A. M. Beekeeping for profit and pleasure.—F. B. Paddock
11:00 A. M. Spring work in the apiary. —C. D. Floyd
1:30 P. M. Bees and agriculture —C. D. Floyd
2:30 P. M. How to get better bees. —W. C. Roberts
3:30 P. M. Installing packages of bees in the bee yard—demonstration in the apiary of installing package bees and of standard practices of handling bees and equipment.—M. H. Haydak, F. B. Paddock, C. D. Floyd, W. C. Roberts

Thursday, May 8

9:00 A. M. Honey production under changing conditions—F. B. Paddock
10:00 A. M. What to do about swarming. —M. H. Haydak
11:00 A. M. Queens and queen rearing. —W. C. Roberts
1:30 P. M. Honey—what it is and how to sell it.—C. D. Floyd
2:30 P. M. Summer management and early Fall management of bees. —F. B. Paddock
3:30 P. M. Fall management and wintering of bees.—M. H. Haydak
6:30 P. M. Informal meeting.

Friday, May 9

9:00 A. M. Adult bee diseases and enemies.—T. A. Gochnauer
10:00 A. M. Brood diseases and their control.—T. A. Gochnauer
11:00 A. M. Legal aspects of beekeeping. —T. L. Aamodt
1:30 P. M. Beekeeping movies.
2:30 P. M. Question box.

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Michigan Beekeepers' Association summer meetings will be held at Frankenmuth park on Thursday, July 24th and at Bellaire park on Friday, July 25th. Meetings begin at 10:00 A. M. Bring a picnic lunch. Coffee and ice cream will be served locally. These will be interesting meetings with short talks and identification of any honey plants that

you wish to bring. All beekeepers and their friends are welcome.—E. C. Martin, E. Lansing, Mich.

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The next **Cuyahoga County (Ohio) Beekeepers' Association** meeting will be held in the Miles Avenue Church of Christ Hall, 9200 Miles Avenue, on May 18. The meeting will start at 1:30 P. M. A cordial invitation to all.

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Those members of **Tazewell County (Illinois) Beekeepers' Association** who have survived the winter will come out of hibernation and meet on Sunday, May 18, at 1:00 P. M. at Mineral Springs Park in Pekin. Basket dinner as usual and then to business. Members of the defunct Caterpillar Bee Club are also cordially invited to attend and join up with us.—Joseph Jachman, Sec.

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Louis H. Hawthorne, New Castle, Pa., a well known beekeeper, passed away March 25, following a brief illness.

Beneficial Insect Research Consolidated into New BEPQ Division

Establishment of a Division of Bee Culture and Biological Control in the Bureau of Entomology and Plant Quarantine, was announced today by the U. S. Department of Agriculture. Avery S. Hoyt, chief of the Bureau, said that all of the Bureau's activities with respect to bees and other beneficial insects would be consolidated into this single Division. This unit is also responsible for research relating to biological control of insect pests and weeds, including diseases of insects.

"By consolidating and coordinating all research on beneficial insects and biological control, we anticipate getting not only greater efficiency of organization, but more far-reaching research accomplishments," Mr. Hoyt said. "Establishing this Division represents one more step in our Bureau-wide reorganization aimed at making the money available for research return the greatest possible benefits to the American public."

James I. Hambleton, for 30 years head of the Division of Bee Culture, was named by Hoyt to head the Division of Bee Culture and Biological Control. Willis J. Nolan, formerly Hambleton's first assistant, will head the Section of Bee Culture Research, and Theodore R. Gardner will head the Section of Biological Control.

Mr. Hoyt says that American agriculture has greatly benefited from research on beneficial insects, and will receive even greater future returns. Research has shown how to make effective use of honey bees as pollinators of seed and fruit crops, adding millions of dollars to the value of these crops. The studies of bee diseases and their prevention, and research into the best methods of bee management, have placed beekeeping on a commercial basis.

The importance of biological control research was demonstrated as far back as 1892, when USDA entomologists introduced the Vedalia beetle into California from Australia to control the cottony cushion scale. More recently, introduction of the Lydella fly and other parasites of the European corn borer from central Europe is meeting with encouraging success. As the parasites continue to become better established throughout the Corn Belt, they are expected to save more and more of this valuable crop.

Since 1950, USDA entomologists cooperating with the Mexican government have introduced four effective parasites of the citrus black fly into that country, which are promising to control the pest and halt its northward movement. In Hawaii, entomologists have introduced a number of parasites of the Oriental fruit fly, three of which already have greatly helped in the control of that serious pest.

Another recent example of biological control mentioned by Mr. Hoyt, concerns the parasite of the Klamath weed, a destroyer of range lands in the West. More than 100 square miles of range in California and Oregon have been cleared of the weed by USDA Australian-imported beetles. Colonies introduced into other States in the Pacific Northwest, where the weed is a serious pest, are expected to do equally as well. — United States Department of Agriculture, Agricultural Research Administration, Washington, April 10, 1952.

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

ANY GRADE—Any amount. Alexander Co., 819 Reynolds, Toledo, Ohio.

IOWA Honey, one can or truck loads. Russell D. Smalley, Beaver, Iowa.

ORANGE, Palmetto, and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

Clover, goldenrod and buckwheat. All size containers. A. I. Root Co., of Syracuse, 1112 Erie Blvd., E., Syracuse, N. Y.

HONEY, white clover, 17c per lb. in single cans, 16c in lots of 5 cans or more. Lose Brothers, 206 E. Jefferson, Louisville, Ky.

STOLLER'S fancy clover honey in new sixties. Stoller Honey Farms, Latty, Ohio.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

CASH FOR YOUR HONEY—Light extracted or comb. Regular trade send sample. 60 lb. cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

CASH FOR BEESWAX. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & Company, 1360 Produce St., Los Angeles 21, California.

HONEY WANTED, any amount. If you want more for your honey, sell it to Cloverdale Honey Co., Fredonia, N. Y.

ALL GRADES HONEY AND WAX WANTED—Mail samples, advise quantity and cash prices delivered to us. HONEY SALES COMPANY, 1808 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINN.

BEFORE YOU SELL your clover honey contact us. Send samples and tell us how much you have. The Delaware White Clover Apiaries, 139 West William St., Delaware, Ohio.

WRITE FOR shipping tags and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 percent saving. Walter T. Kelley Co., Paducah, Kentucky.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 No. High St., Columbus 14, Ohio.

WANTED — White extracted or comb honey. Send sample. Millersport Honey Co., Millersport, Ohio.

WANTED—Buckwheat honey. Eastern Food Products, 115 Division Ave., Brooklyn. N. Y.

WANTED three carloads of buckwheat honey, two carloads of Florida orange blossom honey in barrels or cans, two carloads of southwestern alfalfa or cotton honey. Cash and top prices. Alexander Company, 819 Reynolds Road, Toledo, O.

FOR SALE

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Mich.

The only comb foundation plant in the east. We sell foundation, work your wax, render combs and cappings. Robinson's Wax Works, R. D. 3, Auburn, N. Y.

BEE SUPPLIES. Catalog free. Hodgson Bee Supplies Ltd., 575 13th Ave., New Westminster, B. C., Canada.

BEE SUPPLIES—Tin packages; 10 sizes glass jars; paper shipping supplies; window cartons and other items. Roscoe F. Wixson, Dundee, N. Y.

QUEENBEE PAINTING OUTFIT, $1.50; colony records 10, 15c postpaid. Southwick Apiaries, Waban, Mass.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other Catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., PADUCAH, KENTUCKY.

GET THEM while you can. New or used cans and Root Supplies for cash or honey of any kind. L. E. Hicks, 3930 N. High St., Columbus 14, Ohio.

FOR CHRYSLER ALL-STEEL electric welded queen excluders in the U. S. A., write to: Prairie View Honey Co., 12303 12th Street, Detroit 6, Michigan. Ask for Circular E 2.

YOUR WAX WORKED INTO quality medium brood foundation for 23c pound; 100 lbs., $18.00; medium brood foundation for sale, 85c per pound. Fred Peterson, Alden, Iowa.

SIMPLEX TRAP clips queens without handling, $1.00 postpaid. Instant Frame Spacers — eight-nine, specify size, $1.50 postpaid. Free circulars. George Leys, 36 Jackson St., New Rochelle, N. Y.

FOR SALE 70 colonies of bees and equipment. Reasonable offer accepted. W. A. Ellsworth, Hudson, Ohio.

FOR SALE—New and used bee equipment. Write Ed. Bennett, 429 N. East St., Boyne City, Mich.

FOR SALE — 12 colonies of bees in Standard 10-frame hives. All have from one to five supers on them. Practically all new Root and Dadant-Lewis equipment. Were inspected last fall by Pennsylvania bee inspector, everything was O. K. My hives are all good strong colonies. J. Evans Smeltzer, 1213 S. Albemarle St., Phone 79302, York, Pa.

FOR SALE — 4-frame Root reversible extractor with power drive or hand drive. Diameter 29 inches. $60.00. Also Root uncapping machine with drive and copper boiler, $28.00. Both A-1 condition. C. W. Vogel, Plymouth, Ohio.

FOR SALE — Used Root bee material. 1500 supers, $1.00 each. Some shallow supers 75c each. With and without frames. Some metal covers and bottoms all 10-frame. Montgomery County Apiaries, 114 Indianola Ave., Dayton 5, Ohio.

FOR SALE — 30 colonies Italians, 10-frame. John Schaefer, New Lebanon, N. Y.

10-frame shallow supers with drawn combs, $2.00. John Mihevc, 837 East 237th St., Euclid, Ohio.

FOR SALE — 100 Standard 10-frame hives, certified Italian bees. A. V. Dowling, Valdosta, Ga.

FOR SALE — 800 used honey cans, 2½ inch mouths, washed and dried, no rust. D. F. Treap, R. D. 3, Kent, Ohio.

FOR SALE — 50 colonies of bees. Honey and bee supplies. Wm. March, R. D. 3, Mantua, Ohio.

FOR SALE — One National Standard semi-automatic bottle labeler, first class condition, new V-belt drive with motor, many extra parts, capacity 40 bottles per minute. Superior Honey Company, 4242 Elizabeth Street, Denver 16, Colorado.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CAUCASIANS—2 pound packages, $3.00; 3 pound packages, $4.00. Queens, $1.00 each. Lewis and Tillery Bee Co., Route 1, Box 294, Greenville, Ala.

HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

Michigan Headquarters for
Root QUALITY
Bee Supplies
Complete Line of Bee Supplies and Honey Containers
Prompt Service
Michigan Bee and Farm Supply
510 N. Cedar St.
Box 7 Lansing, Michigan

G. B. Lewis Wooden Goods!
Dadant's World Famous Crimp Wired Foundation. — Their 85 years' experience is your safeguard. Catalogue on request.
Dotson's Apiaries
3059 W. Roxboro Rd., NE
ATLANTA, GEORGIA

HONEY LABELS
Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

JENSEN Says:

QUALITY will win out in the final analysis, and by the way you beekeepers are sending your orders to us we know you want quality package bees and queens. Also "RIGHT NOW SERVICE".

We're too busy to tell you more about them, but they will speak for themselves in terms of honey stored, if you will do your part.

We Guarantee: Freedom from disease, and will pass your state regulations regarding Nosema. Never an outbreak in this area.

"MAGNOLIA STATE"
ITALIAN BEES AND QUEENS

Quantities	Queens	2-lb. w/q	3-lb. w/q
1-24	$1.20	$3.75	$4.75
25-99	1.10	3.50	4.50
100-499	1.00	3.25	4.25
1000-up	.95	3.00	4.00

For Queens of Dadant's Improved Stock of "Starline" D.R. Hybrids, add 25c per queen or package to above prices. Queens Clipped and Marked Free. Prepaid. Via Air Mail when expedient.

Package bees by Express Collect. Live delivery guaranteed. For Parcel Post allow 6 lbs. and 8 lbs. on 2 and 3 lb. packages respectively, and apply your postal zone. Include postage with your remittance.

JENSEN'S APIARIES, Macon, Miss. U.S.A.
"The business QUALITY built."

ITALIAN BEES & QUEENS

Book your orders now. Full weight, Health certificate, and live delivery guaranteed. Via express.

2-lb. pkg. with queen $2.50
3-lb. pkg. with queen 3.40
Queens ..... .90

Homan Bros.
R. 2 Shannon, Miss.

NORMAN BROS.

Package Bees & Queens — For Profit or Pleasure

BRIGHT 3-BANDED ITALIAN
QUALITY PLUS SERVICE

NOW READY. Full weight, safe arrival, state health certificate, and satisfaction guaranteed.

— Prices —

2-lb. pkg. with queen	$3.00
3-lb. pkg. with queen	4.00
Untested queens	.90
Tested queens	1.75

Package bees are shipped express F.O.B. If wanted shipped parcel post, add postage.

NORMAN BROS. APIARIES
Ramer, Ala.

Will fill your cages with certified Italians. 50c pound after May 15th. Write for other package prices. A. V. Dowling, Valdosta, Georgia.

THREE BANDED ITALIAN bees and queens. Good workers and gentle. 2-lb. with queen, $3.50; 3-lb. with queen, $4.50. Select untested queens, 1 to 25, $1.20; 25 to 50, $1.10; 50 up, $1.00 each. Write for prices on larger orders. Satisfaction guaranteed. Alamance Bee Company, Geo. E. Curtis, Mgr., Graham, N. C.

YANCEY HUSTLERS — Packages and Queens, ready April 1st. Three-band Italians, bred for business. Overweight packages, queens spring-reared under ideal conditions. All guaranteed to please. 2-lb. pkg. with queen, $3.50; 25 or more, $3.25 each; 50 or more, $3.00 each. For 3-lb. packages, add $1.00 to above prices. Caney Valley Apiaries, 2500 Nicholas, Bay City, Texas.

GOLDEN ITALIAN BEES AND QUEENS. Very yellow and gentle. 2-lb. with queen, $3.50; 3-lb. with queen, $4.50; Select untested queens, 1 to 25, $1.20; 25 to 50, $1.10; 50 up, $1.00 each. Carolina Bee Farm, W. O. Curtis, Graham, N. C.

CAUCASIAN BEES AND QUEENS. Extra good workers and very gentle, 2-lb. with queen, $3.50; 3-lb. with queen, $4.50, Untested queens, 1 to 25, $1.20; 25 to 50, $1.10; 50 up, $1.00. Black River Apiaries, Elliott Curtis, Mgr., Currie, N. C.

YELLOW ITALIAN bees and queens. Quality and service guaranteed. 2-lb. with queen, $3.65; 3-lb. with queen, $4.65; queens, $1.00. O. E. Brown, Route 1, Asheboro, N. C.

EARLY PACKAGE BEES. Prompt shipment begins May 10th. Two-pound package and queen, $5.50 postpaid. Three-pound package and queen, $6.60 postpaid. Choice Italian queen, $1.25. Safe arrival guaranteed. Health certificate furnished. Birdie M. Hartle, Reynoldsville, Pa.

GREEN'S PROFIT PRODUCING Italian queens will please you. My 25 years' experience is your safe guard. If you want a better hive of bees, get a better queen. Start shipping about March first. Price, 90c each. After June first, 50c each. Cash before shipping dates. D. P. Green, De Land, Fla., R. 2, Phone 512M.

CAUCASIAN queens, young laying. Personally raised. $1.00 each. Fred Brock, McDonald, Tenn.

MISCELLANEOUS

FREE: Montgomery Wards' 140-page Farm Equipment Catalog. Contains full line of modern beekeeping supplies for profitable honey production and plant pollination. Hives, frames, supers, foundation, accessory tools, extractors, marketing cans, jars. Also certified healthy, gentle 3-banded Italian bees and purebred queens. Catalog contains hundreds of other items, including fence, poultry, dairy and stock supplies; garden tractors, grain handling equipment, hand and power sprayers, insecticides. Write today for this up-to-date, money-saving Catalog to Montgomery Ward, Dept. FR-56, Chicago 7, Ill.

HELP WANTED

WANTED — Reliable experienced man with good habits to work with bees and honey production. 1200 colony system, located in Finger Lake region of New York. Roscoe F. Wixson, Dundee, N. Y.

SEEDS

HONEY PLANTS our specialty. Catalog on request. Pellett Gardens, Atlantic, Iowa.

MISCELLANEOUS WANTED

WANTED — Several thousand shallow supers. Give full description, lowest cash price. Write the Stoller Honey Farms, Latty, Ohio.

WANTED—Brand capping melter. W. Klabuhn, Rt. 2, Norwalk, Ohio.

WANTED—900 acres alfalfa and sweet clover. Need bees. Contact G. A. Rietz, Box 555, Aberdeen, S. Dak.

WANTED—Gleanings May and November, 1948 and January 1949. State your price and condition. Ralph Cobb, 440 Shaddon Rd., Elyria, Ohio.

Stray swarms decoyed into tree boxes. Methods from 40 years' bee trapping experience. Illustrated bulletin, $1.00. Jess Kovanda, Ord, Nebr.

MAGAZINES

WESTERN CANADA BEEKEEPER—Official organ of the Manitoba Beekeepers' Association. One year, $1.50; two years, $2.25; three years, $3.00. In combination with Gleanings in Bee Culture, $2.75. 211 Affleck Bldg., Winnipeg, Canada.

THE BEE WORLD, international and scientific journal on bees and beekeeping, with apiculture abstracts. Monthly, including membership in the Bee Research Association, $3.00 per annum, including apicultural abstracts. Dr. Eva Crane, Director, 55 Newland Park, Hull, Yorks, Eng.

Know interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh, Dist. Naini Tal, U. P., India, or available through them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy, Rs ¼s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamps of your country accepted.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

DO YOU FIND it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any other magazine published. Subscription $1.00. Hotel Cactus, San Angelo, Texas.

TOO LATE TO CLASSIFY

FOR SALE—300 colonies, state inspected, and equipment, with location. H. A. Ross, Poseyville, Ind.

FOR SALE—200 zinc queen excluders; 1 24-frame extractor; 1 honey pump with pipe. Charles D. Pattington, Scipio Center, New York.

FOR SALE—10 hives of bees. Southern stock, $7.00 each. Frank Noel, R. D. 1, Stroudsburg, Pa.

Package Bees for 1952

Truck loads a specialty
Nuclei made to order
Italian Queens

Eugene Walker

Live Oak, Calif.

CAUCASIANS
CARNIOLANS

Hardy, prolific, rapid build-up, best of workers. Caucasians have the longest tongue of any race.

Both build beautiful white combs. **Gentlest of all races of bees. Gentleness saves time, sweat, patience, and work. Untested queens from our Florida yards, $1.20 each.**

Order here but mailed from Florida, Air Mail. N. J. reared queens ready May 25th, $1.00 each, Air Mail. A few packages yet. Ask. Over 27 years a queen breeder.

Albert G. Hann
Glen Gardner, N. J.

High Quality Italian Package Bees and Queens
Prolific & Productive

	Queens	2-lbs.	3-lbs.	4-lbs.	5-lbs.
1-24	$1.00	$3.25	$4.00	$4.75	$5.50
25-up	.90	2.90	3.65	4.40	5.15

Write for prices on larger orders. For queenless packages deduct price of queen. Queens sent Air Mail. Packages by Express Collect unless Parcel Post is prepaid by customer. State Health Certificate and Live Arrival GUARANTEED. PLEASE ORDER DIRECT FROM THIS AD. After May 10th DEDUCT 10% from above prices. Thanks.

Carlus T. Harper
New Brockton, Ala.

Our 1952 prices will interest you.
Our packages and queens from ABBA selected stock will please you. Write us today.
J. F. McVay Jackson, Ala.

Five complete Hives as pictured with Kelley's "Easy Grip" frames, **$31.75**

HIGH QUALITY LOW PRICE BEE SUPPLIES

Low prices mean nothing if shipment is not prompt and the quality is not high. We offer both and still quote very low prices because of our country location, big factory operations and personal supervision. Our 64 page catalogue is nearly twice as large as any other bee supply catalogue. Write for your free copy today.

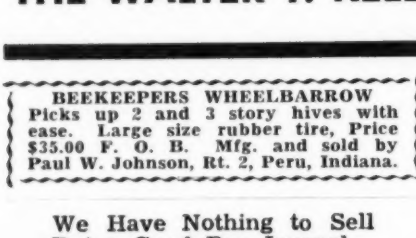
THE WALTER T. KELLEY CO. Paducah, Ky.

BEEKEEPERS WHEELBARROW
Picks up 2 and 3 story hives with ease. Large size rubber tire, Price $35.00 F. O. B. Mfg. and sold by Paul W. Johnson, Rt. 2, Peru, Indiana.

Good Italian Queens
One Dollar Each
White Pine Bee Farms
Rockton, Pa.

We Have Nothing to Sell
But a Good Bee Journal
BEEKEEPERS MAGAZINE
Lansing 17, Michigan
Fourteenth Year of Publication
One Year, $2.00
Three Years, $5.00
Sample copy mailed upon request

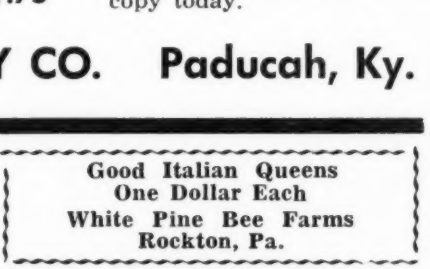
FRAME GRIP SEND NOW!!



This light modern tool is for easy handling and removal of frames from the bee hive. Orders promptly filled—Satisfaction guaranteed!

$3.00 plus 30c postage fee

McCord Manufacturing Co.
Rt. 2 Box 866
San Jose, Calif.



The Plastic Chunk Honey Container of the Right Size

• • Yes, here is the ideal container for chunk honey. It measures inside 4¼" x 4¼" and is a full 1⅜" deep. The top snaps on snugly and you then have a smart, attractive package that will appeal. The buyer can see the product and that is important. Another point is that the container can be used as a refrigerator box or sandwich box when the honey is gone. This container can sell honey!

Write:

Norco Plastic, Inc.
3888 N. Fratney St.
Milwaukee 12, Wisc.

A TALK TO BEGINNERS

(Continued from page 286)

One advantage in feeding granulated sugar is that it does not stir up the bees and encourage robbing. Furthermore, feeding is a very simple matter. I carry this large bucket, containing some sugar, in my car as I make the rounds of bee yards. Even though I can't drive into some of the yards, I can easily carry the bucket of sugar from the road into the apiary. If I had to carry sugar syrup, that would mean considerable more work.

The other day I examined the combs of one colony that had taken practically all of the sugar I gave it and found that the bees had liquefied the sugar and stored it in the combs adjacent to the brood nest. The bees had to add water to the sugar to liquefy it.

Keep Bees Well Fed During May

May is a critical month for bees, especially in the clover belt. If beekeepers provide good combs, ample comb space for the storage of incoming nectar and pollen, also for brood rearing, if they have each colony headed with a good prolific queen, and last but not least, maintain an adequate amount of honey for each colony, never less than 15 pounds of honey during the spring months, they are bound to secure a good crop if it is available. I honestly believe that the honey crop in the United States could be doubled each year if only the beekeepers throughout the country would maintain honest-to-goodness colonies, provide ample comb space, and give their bees plenty to eat. It seems obvious that more bees are lost through starvation than from any other single cause.

Now it is one thing to say these things and still another thing to do them. Here I am—having lost a colony from starvation and find it necessary to do some spring feeding. If I had provided all of my colonies with a superabundance of stores last fall, I wouldn't have to do any feeding at present and I would be saving the labor required for spring feeding, not to mention the cost of sugar.

Replacing Poor Queens

As we check through our colonies this spring we may find some old queens that have outlived their usefulness. Such queens should be replaced by young vigorous laying queens as soon as possible. A good queen is known by the work she does. If she has large solid areas of brood and is laying prolifically, she should be kept. If, on the other hand, she is small and shiny in appearance, lays in a scattered fashion, and is somewhat wabbly as she walks over the combs, she should be replaced.

You Want Merrill's Quality Bees

Why? Because they are as good as the best. Now ready, no delays. D. R. Italian stock only.

F.O.B. PRICES	1-50	50-1000
2-lb. pkgs. with qns.	$3.00	$2.75
3-lb. pkgs. with qns.	4.00	3.75
Untested queens D. R. Stock	1.00	.90
Tested queens	2.00	

Queens Air mailed and clipped if wanted at above prices. Write for prices of bees delivered by mail.

Merrill Bee Company

P. O. Box 115 State Line, Miss.

Whittle's

Leather Colored Italians

Get your Packages and Queens when you want them. Reserve 1952 Shipping Dates Early.

3 lb. pkg. with queen $3.75
2 lb. pkg. with queen 2.75
Queens, each ..... .85

Our Bees and Service Will Please You.

G. E. Whittle
Star Route West
Greenville, Alabama

Protect Your Future Now. Buy Your Savings Bonds Now.

Package Bees and Queens

THE BEST is none too good for our customers. We strive to produce the best, and we CAN produce evidence that the bees we supply are TOPS. Our queens are HONEYS for PRODUCTION and WINTERING, and no BALONIUM.

Italians-Caucasians-Hybrids

Untested queens $1.50
2 lb. pkg. with queen 4.00
3 lb. pkg. with queen 5.00

10% discount on 25 or more packages or queens. 20% discount on 100 or more.

The Coffey Apiaries

Whitsett, Texas

ITALIAN BEES AND QUEENS

	1-9	10-99	100-up
2-lb. pkg.	$2.75	$2.65	$2.50
3-lb. pkg.	3.70	3.60	3.45
4-lb. pkg.	4.50	4.40	4.30
Nice large queens	.85	.75	.70

After May 20th each
2-lb. pkg. $2.50; 3-lb. pkg.$3.50
4-lb. pkg. $4.30; large qns. 60c
Queens after June 1st
1-99, 55c; 100 up 50c

MITCHELL'S APIARIES
Bunkie, La.

WILLIAMS ITALIAN BEES

2-lb. package bees with queen....$2.75
3-lb. package bees with queen.... 3.75
Queens (postpaid) 1.00

Guaranteed full weight and prompt shipping dates. Health certificate with each shipment.

DR. WILLIAMS APIARIES
303 W. Defee Ave. Baytown, Texas

Healthy Italian Bees Queens
Write for 1952 Prices
Georgia Bee & Honey Apiaries
P. O. Box 312 Hortense, Ga.

Thrifty Bees

Three-Banded Italians Only

Prices on package bees are FOB and include queen.

2 lb. packages in lots of

1 to 24	$3.25
25 to 99	3.00
100	2.75

For larger packages add 75c for each additional pound.

Untested queens
1 to 24, $1.10; 25 to 99, $1.05; 100, $1.00 each.

After May 15th, deduct 25c from above package prices. Untested queens will be: 1 to 24, 85c; 25 to 99, 75c; 100, 70c each.

We guarantee live delivery and full weight packages of young, THRIFTY bees.

W. J. Forehand & Sons
Fort Deposit, Ala.
Breeders Since 1892

Gaspard's Italian Queens & Package Bees

2-lb. pkg. with queen	$2.70
3-lb. pkg. with queen	3.40
4-lb. pkg. with queen	4.10
5-lb. pkg. with queen	5.10
Queens	1.00

10% discount on 100 pkgs. or more.
Young queens and bees in every package.
Live delivery guaranteed and health certificate with each shipment.
GASPARD BEE CO. Hessmer, La.

NORTHERN QUEENS

Pure leather colored acclimated Italian stock; shipping starts in May.

"They're Winterized"

Untested	$1.00
Select tested	2.00

Clipped, Air Mailed, Painted

BARGER APIARIES, Carey, O.

Queens

Top Quality Italians Personally Raised

After May 10th $1.00 Each, Any Amount

SAM E. MOORE
2436 North St. Ph. 293 R
Redding, Calif.

SMALL BEEKEEPERS

Stop Losing Swarms
Get Rid of Drones

Print your name and address on a postal and mail it to
C. H. Pease, Canaan, Conn.
and you will learn how easily you can do it and
MAKE MORE HONEY

HOWARD WEAVER'S
Caucasian Package Bees & Queens

	Queens	2-lb. W. Qn.	3-lb. W. Qn.
1 -24	$1.20	$3.50	$4.50
25-49	1.10	3.25	4.25
50-up	1.00	3.00	4.00

All queens are shipped post paid, while package bees are express collect, unless buyer remits postage with order.

Howard Weaver
Navasota, Texas

KOEHNEN'S
Package Bees and Queens
For Quality and Service
KOEHNEN'S APIARIES
GLENN, CALIFORNIA

Northern California
Package Bees and Queens
Will accept some honey in exchange for packages
F. E. Morrison
Rt. 3, Box 3696, Auburn, Calif.

ITALIAN BEES AND QUEENS
2-lb. package with queen $2.75
3-lb. package with queen 3.50
Queens (postpaid) ..... .80
Satisfaction and live delivery guaranteed. Health certificate with each shipment.
BAYOU BEE CO.
Rt. 1 Box 49 Montegut, La.

Three Banded Italians

2-lb. pkg. of bees	$3.00
3-lb. pkg. of bees	3.75
4-lb. pkg. of bees	4.50
Queens	1.00

Each package has a young laying queen.
We guarantee full weight, young bees, and live delivery by express.

W. E. Plant
Hattiesburg Mississippi

Bees and Queens

Caucasians or Italians

All queens introduced in packages. 2-lb. package with queen, $3.00 each in lots of three or more. Prompt shipments with health certificate, and safe arrival guaranteed.

Little River Apiaries
Box 83 Gause, Texas

QUALITY 3-Banded ITALIANS
Queens — 80c each Postpaid
Add 6c each for Air Mail

2-lb. Pkg. & Queen	$2.75 each
3-lb. Pkg. & Queen	3.50 each
4-lb. Pkg. & Queen	4.25 each
5-lb. Pkg. & Queen	5.00 each

Live Delivery ——— No Disease
EELLS HONEY & BEE CO.
Houma, Louisiana

BERRY'S

Old Reliable Italian Bees

57 Years With the Bees

America's Best Package Bees and Finest Queens
INSURE your honey crop with DEPENDABLE BERRY Bees

(90 percent of our package bees are under 10 days old)

Fill those vacant and weak hives with Berry's producing swarms. We ship annually thousands of packages and queens. We have virtually no complaints as to supersedure, and ABSOLUTELY NONE relative to NOSEMA. Having a large number of branch apiaries located in the North Central Western States gives us an excellent opportunity to test our unsurpassed strain for not only honey production, but also for diseases and climatic working ability. In our CUSTOMERS' opinions as well as our own, our strain of Italian bees is unsurpassed by any type or kind of bee known, whether hybrid or otherwise. Fifty-seven years of **SELECTIVE BREEDING COUNTS.**

Package Bees with Queens and Individual Queens
(Prices after May 10th)

Quantity	Queens	2-lb. pkgs.	3-lb. pkgs.	4-lb. pkgs.	5-lb. pkgs.
1 -24	$1.00	$2.75	$3.75	$4.75	$5.75
25 -99	.90	2.65	3.65	4.65	5.65
100-up	.85	2.55	3.55	4.55	5.55

(For Queenless Packages deduct price of queen)

All our queens in our packages, or individual queen orders, are SELECT QUALITY. The culls we DESTROY. Only queens we would use in our own apiaries do we cage for shipment. Queens' wings clipped FREE OF CHARGE on request.

Safe arrival and satisfaction we guarantee on everything we ship, whether packages or queens. All orders filled PROMPTLY. We have NO DISEASE. A HEALTH CERTIFICATE and directions telling how to handle accompany all shipments.

References: The Union Bank & Trust Co., or First National Bank, Montgomery, Alabama. Any bee journal in the U. S. or Canada.

Remember: Thousands of strong colonies and thousands of queen yard nuclei enable us to give you PROMPT and DEPENDABLE SERVICE.

CAUTION: We are not to be confused or compared in any way with the many part-time, unreliable, small beekeepers who are classing themselves as dependable shippers.

M. C. Berry & Son

P. O. Box 684 **Montgomery, Alabama**

Oldest Active Package Shippers in the South

BEGINNING THE HARD WAY

(Continued from page 271)

did seem to act peculiarly. They did seem to sneak into the hive entrance. There were fights between worker bees on the landing board. Bees coming from the hive did climb up on the side of the hive prior to take off. Everything pointed to robbers, and again I sat right next to the hive and did not realize what was going on. As these things go, it was not until it was way too late that the final realization dawned. By the time I finally became aware that something was radically wrong, the robbers had taken the severest of tolls. Not only did they reduce my colony to absolute submission, but they totally destroyed the combs which had been drawn. This all left me with absolutely nothing but an increased fund of knowledge. The net result of all has been the destruction of the colony. The hive is now well closed up waiting for its new tenants. Despite the discouragement of last year I am not giving up.

Better Luck Next Time

Instead of one colony, there will be four. Two of these will be located where ill-fated number one stood last year. The other two will be set out about four miles away in an entirely different area insofar as the available types of honey plants are concerned. Two of the hives will have hybrid queens. Adequate records will be kept for each of the colonies. The entire operation this year will be based more upon the scientific concepts of beekeeping and less upon a mere desire for honey. Last year was difficult, but I don't consider it entirely wasted. More was learned the hard way than could ever have been learned from a text alone. This year with the benefit of previous mistakes plus the additional knowledge obtained from text books and from helpful, experienced beekeepers, a tyro looks again with unabated enthusiasm towards a fresh start in an absorbing avocation.

If you are taking time to read, why not read the best? Condensed to save you time. Illustrated to give you pleasure.

Modern Beekeeping
The Picture Bee Magazine
Box 210 Paducah, Kentucky

Joe says:—

"No time to write ads, too busy shaking packages." He has told you all along about the packages and queens he is offering.

Prices with queens	2 lb.	3 lb.
1 to 25	$3.25	$4.25
26 or more	3.00	4.00

Can supply either Kelley Island Hybrid or our regular stock queens.

Rossman & Long
Moultrie, Georgia

Joe is J. G. Rossman who has been partner and manager of this business since it was organized. He will have more to tell you after the rush is over.

Three-Banded Italian Package Bees and Queens

Italian stock that is carefully selected primarily for what they produce and their gentleness. Place your 1952 requirements with me now. Have Caucasian queens also. Prices are:

Lots of	Queens	2-lb. w/q	3-lb. w/q	4-lb. w/q
1 - 25	$1.15	$3.00	$3.90	$4.85
25- 50	1.05	2.90	3.80	4.75
50-100	1.00	2.85	3.75	4.65

Farris Homan
Shannon, Miss.

LIVE AND LEARN

(Continued from page 287)

entrance way over on the opposite side of the hive. The neighbor's bees like to come over and suck the syrup out from the tiny crack between the metal cap and the glass jar and that can start robbing. Your own bees have fun robbing each other. But that's easy to control. Just get a rubber jar ring out of the preserve closet and screw the jar tightly into the cap. That removes all temptation.

York's Package Bees and Queens for 1952

Quality Bred Italians

The Strain Preferred by Leading Honey Producers

Quantity	Package Bees with Queens 1 to 24	25 to 99	100 up
2-lb. Packages	$3.50 each	$3.25 each	$3.00 each
3-lb. Packages	4.50 each	4.25 each	4.00 each
4-lb. Packages	5.50 each	5.25 each	5.00 each
5-lb. Packages	6.50 each	6.25 each	6.00 each
Queens	1.10 each	1.05 each	1.00 each

Queenless Pkgs., deduct $1.00 per pkg. Tested queens, $1.00 extra
Place orders now for shipping dates wanted.
Shipment by express, parcel post, and truck.

YORK BEE COMPANY Jesup, Georgia, U.S.A.
(The Universal Apiaries)

ITALIANS

Bees Queens

We are booking package bees for 1952.

Order early and avoid delay at your time of need.

Liberal weights, live delivery, and satisfaction guaranteed.

	2 lb. w/q	3 lb. w/q
1 -25	$3.40	$4.50
25-up	3.10	4.25

Queens $1.10

The Cherokee Bee Co.
Cordele, Ga.

LADY LIKE CAUCASIAN bees in our testing apiaries in a North Central State more than doubled that state's average per colony honey crop in 1951. Our breeding queens for this season were selected for disease resistance, honey production, and gentleness. Their daughters will produce for you if properly handled.

	1-11	12-49	50-up
Select untested qn., ea.	$1.30	$1.20	$1.10
2-lb. with " " "	3.75	3.65	3.50
3-lb. with " " "	4.75	4.65	4.50

Select untested qn. after June 1st, $1.10 ea., any number. Circular on request.

Caucasian Apiaries
Castleberry, Ala.

HARDY NORTHERN YANKEE QUEENS
Tested Queens $1.00
Ready about June 1st.
R. L. LIVERMORE APIARIES
Belle Center, Ohio

Queens Our Specialty
Italian, Caucasian, and Carniolans
Three Isolated Mating Yards to Prevent Mixing Breeds

ITALIANS .....$1.00 each
Caucasians ..... 1.10 each
Carniolans .....1.25 each

Shipments start Feb. 20, 1952.
All Queens shipped by Air Mail and guaranteed to please.

Walter D. Leverette Apiaries
Box 364 Fort Pierce, Florida

K N I G H T ' S
THREE BANDED LEATHER COLORED ITALIAN BEES AND QUEENS

Change in prices for April and May Delivery:

2 lb. pkg. with Queen, any number	$3.00
3 lb. pkg. with Queen, any number	4.00
Queens via Air Mail, any number	1.00

I guarantee a good full weight package with a Good Young Laying Queen, Safe Arrival and Your Satisfaction.
I Will Appreciate an Order From You

JOHN T. KNIGHT, Hayneville, Ala.

STARLINE SUNKIST Italian

With increased honey price it will pay you to buy only the best.
Your choice of two top producers.

Prices:	Until May 20			After May 20		
	1-24	25-50	50-up	1-24	25-50	50-up
Starline Queen	$1.45	$1.35	$1.35	$1.35	$1.25	$1.25
Italian Queen	1.10	1.00	0.95	0.75	0.70	0.65
2-lb. w/q	3.50	3.25	3.00	2.60		
3-lb. w/q	4.50	4.20	3.90	3.50		

Packages with Starline Queens, add 35c

SUNKIST BEE COMPANY CONVENT, LA.

BETTER BRED QUEENS

Three Banded Italians

Stetson Hats — Florsheim Shoes — Standards of Quality.
Our Better Bred Queens and bees are Standards of quality. Not the cheapest, but among the best. They have stood the test and are as good as money can buy. Order direct from this ad at the following prices:

2 lb. packages, bees with queens $2.75
3 lb. packages, bees with queens 3.75
Queens ..... .75

Any Quantity

Calvert Apiaries Calvert, Alabama

Dadant's Starline Hybrids — John Davis Italians
Produced in Little's Apiaries

	Queens	Packages 2-lb.	3-lb.	4-lb.	Queens Packages with Davis
1-24	$1.45	$3.75	$4.50	$5.45	$1.20 queens deduct
25-99	1.35	3.50	4.40	5.25	1.10 25c from
100-up	1.25	3.25	4.25	5.15	1.00 Starline prices

Reg. U.S. Pat. Off.

Extra pounds, $1.00 per lb. Shipping starts about April 10.

LITTLE'S APIARIES

Shelbyville, Tenn. P. O. Box 122

1952 ITALIAN PACKAGE BEES AND QUEENS 1952

Quantity Packages	2-lb. w. q.	3-lb. w. q.	4-lb. w. q.
1-12	$3.00 ea.	$4.00 ea.	$4.80 ea.
13-99	2.90 ea.	3.75 ea.	4.60 ea.
100 or more	2.75 ea.	3.50 ea.	4.25 ea.

QUEENS: $1.00 each, postpaid.

Above prices are F. O. B. Hahira, Ga. Live delivery GUARANTEED. Certificates of Inspection included with all shipments. TERMS: Payment in full prior to shipping.

GOLD LEAF APIARIES BOX 252 HAHIRA, GA.

PACKAGE BEES AND QUEENS — "ITALIANS"

	1-9	10-99	100-up
2 lb. pkg. with queen	$3.25	$3.00	$2.90
3 lb. pkg. with queen	4.25	4.00	3.80
4 lb. pkg. with queen	5.25	5.00	4.75

Extra Queens $1.00 each

We guarantee live delivery, a health certificate with each shipment, and service on which you can depend. Shipments by express or parcel post.

Quality Does Not Cost — It Pays

THE WILBANKS APIARIES Claxton, Georgia

BRITISH BEE JOURNAL

The Only WEEKLY Bee Journal in the World

Subscription $3.00 per annum payable in advance.
Keep up to Date in Beekeeping by taking out a subscription now through our agents:

Gleanings in Bee Culture

Australasian Beekeeping News
The Leading Bee Journal of the Southern Hemisphere is the

"AUSTRALASIAN BEEKEEPER"

Subscription 18 shillings per year post free. Start any time. Inquire for International Money Order for 18 shillings (Australian) at your Post Office.

Write now to the Editor
P. O. Box 20, West Maitland
New South Wales, Australia

PACKAGE BEES — ITALIAN QUEENS

	1-49	50-99	100-up
2 lb. with queen	$3.50	$3.25	$3.00
3 lb. with queen	4.50	4.25	4.00
4 lb. with queen	5.50	5.25	4.90
5 lb. with queen	6.50	6.25	5.80
Queens	1.15	1.10	1.00

Safe arrival and satisfaction guaranteed.

Queens sent airmail postpaid—clipped on request.

GEO. A. HUMMER & SONS

Est. 1892

Prairie Point, Miss. Western Union, Macon, Miss.

THE RICH HONEY FARMS, JEANERETTE, LA.

ITALIAN PACKAGE BEES—Heavy with bees, no drones. Shipped by parcel post or express. For parcel post shipment, add 75c per package for postage.

QUEENS—The finest money can buy. Your choice of two outstanding breeds. Painted, clipped or airmail at no extra cost.

DADANT'S STARLINE HYBRIDS

Worth much more than the price we are asking. You have years of selective breeding and testing in the ancestry of this strain. Every desirable quality known to beemen is bred into this line by artificial insemination. It has taken years to get this strain where it is today, and if in years to come there are better bees this will be it.

Starline queens:	1-24	$1.45
	25-99	1.35
	100-up	1.25

RICH'S LEATHER ITALIAN STOCK

Gentle, uniform, and good producers will do their part in getting for you many supers of honey. Breeding stock selected for high production, non-swarming, and gentleness. These bees are not resistant to A.F.B. as are the Starline Hybrids. You will, however, find them very profitable.

Regular Leather Italian queens:	1-24	$1.20
	25-99	1.10
	100-up	1.00

Packages	1-24	25-99	100-up
2-lb.	$3.50	$3.25	$3.00
3-lb.	4.50	4.25	4.00
4-lb.	5.50	5.25	5.00

When ordering packages with Starline queens, add 25c per package.

THREE-BANDED ITALIAN BEES AND QUEENS

We have a large number of package bees and queens for MAY and JUNE delivery at prices you will like.

2 lb. pkg. with queen ....$2.45 **3 lb. pkg. with queen** $3.45

Untested Italian queens ..... .75

Queenless package deduct price of queen.

Live delivery guaranteed.

LUCEDALE APIARIES LUCEDALE, MISSISSIPPI

1952 CAROLINA'S

Three-Banded Italian Bees and Queens

High-Quality Merchandise and Service

1. PREPAID to your door.
2. Queens clipped and painted for easy identification.
3. Guaranteed safe arrival.
4. Health Certificate with each shipment.

In spite of increased labor and material costs, our 1952 prices have not been increased.

1952 PRICES DELIVERED, PREPAID

Queens each	2-lb. & qn.	3-lb. & qn.	4-lb. & qn.	5-lb. & qn.
1-24 $1.10	$4.00	$5.00	$6.00	$7.00
25-99 1.00	3.75	4.70	5.65	6.60
100-499 .95	3.50	4.40	5.30	6.20

(for queenless packages deduct price of queen)

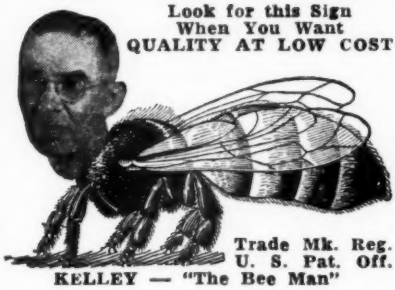
SHIPPED ANYWHERE IN UNITED STATES AND CANADA.

Terms: One-third upon receipt of order, balance ten days before shipment.

CAROLINA HONEY COMPANY

H. C. Brunson, Lessee

P. O. Box 188 Hampton, South Carolina Phone 4282



Look for this Sign
When You Want
QUALITY AT LOW COST

Trade Mk. Reg.
U. S. Pat. Off.

KELLEY — "The Bee Man"

Bees and Queens

Three banded Italian bees and KELLEY'S ISLAND improved hybrid queens direct from our own farm. Shipments start April 1st, express or parcel post shipment. Thousands of extra queens.

	Kelley Island Queens	2-lb. bees & K. I. queen	3-lb. bees & K. I. queen
1-24	$1.10 air mail	$3.50	$4.50
25-99	1.00 air mail	3.25	4.25
100-up	.95	3.00	4.00

The Walter T. Kelley Co. Paducah, Ky.

Three-Band Italian Package Bees and Queens and Pure Italian Three-Way D. R. Queens

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100-up, each	2.80	3.50	4.25	5.00

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25 -99	1.00	1.35	3.15	4.10	5.00
100-up	.95	1.25	3.00	3.90	4.85

Prices from May 20th

	QUEENS		PACKAGES		
	Italians	Starline	2-lb. w/q	3-lb. w/q	4-lb. w/q
1 -24	$ .95	$1.35	$3.00	$3.95	$4.85
25 -99	.85	1.25	2.90	3.85	4.75
100-up	.75	1.15	2.75	3.65	4.60

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3-Banded Italians
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for 1952
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